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Western Mining in the Twentieth Century Oral History Series

Langan W. Swent

WORKING FOR SAFETY AND HEALTH IN UNDERGROUND MINES; SAN LUIS AND HOMESTAKE MINING COMPANIES, 1946-1988

In Two Volumes

Includes interviews with Eleanor H. Swent

With Introductions by
Richard Stoehr and Laura Madsen

Interviews Conducted by
Malca Chall
in 1987-1988, 1994

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LCT flotilla commander Lt. Langan W. Swent, July 1944. Taken on board LCT-223 in Naples, Italy.

VOLUME ONE

Cataloging information

SWENT, Langan W. (1916-1992) Mining engineer; executive

Working for Safety and Health in Underground Mines; San Luis and Homestake Mining Companies, 1946-1988, two volumes, 1995, xix, 1007 pp.

Family and youth in Tayoltita, Mexico; education at Moses Brown School, Providence, R.I., Stanford, UC Berkeley Graduate School of Mines, Harvard; US Navy Landing Craft Tanks in Africa, Italy, France, 1941-1945; mining career: gold, in Lead, South Dakota, 1946-1947, 1954-1957; silver, in Tayoltita, Mexico, 1947-1954; uranium, in Grants, New Mexico, 1957-1966; Homestake Mining Co. corporate headquarters, San Francisco, 1966-1983: ventures in California, Missouri, Michigan, Australia, Peru; research and analysis regarding radiation exposure and cancer among miners, radon daughters; relationships with federal agencies dealing with environmental problems created by mining, and health and safety standards in mines; review of Homestake presidents, 1914-1988, and changes in corporate culture and management practices; comprehensive discussion of mining technologies: drilling, tunneling, sinking shafts, ventilation; union and non-union labor relations, management and personnel policies, politics and community relations, research on radiation; thoughts on family, and foreign and domestic travel. Includes an interview with Eleanor Swent on youth in Lead, Wellesley College years, marriage to Langan Swent, and experiences raising children and participating in community life in Tayoltita, Lead, Grants, and Piedmont, California.

Introductions by Richard Stoehr, Consultant to the Chairman and Chief Executive Officer, Homestake Mining Co., and Laura Madsen.

Interviewed 1987-1988, 1994 by Malca Chall for Western Mining in the Twentieth Century Oral History Series. Regional Oral History Office, The Bancroft Library, University of California, Berkeley.

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INTRODUCTION to Eleanor Swent, by Laura Madsen

INTERVIEW HISTORY--by Malca Chall

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PREFACE

The oral history series on Western Mining in the Twentieth Century documents the lives of leaders in mining, metallurgy, geology, education in the earth and materials sciences, mining law, and the pertinent government bodies. The field includes metal, non-metal, and industrial minerals, but not petroleum.

Mining has changed greatly in this century: in the technology and technical education; in the organization of corporations; in the perception of the national strategic importance of minerals; in the labor movement; and in consideration of health and environmental effects of mining.

The idea of an oral history series to document these developments in twentieth century mining had been on the drawing board of the Regional Oral History Office for more than twenty years. The project finally got underway on January 25, 1986, when Mrs. Willa Baum, Mr. and Mrs. Philip Bradley, Professor and Mrs. Douglas Fuerstenau, Mr. and Mrs. Clifford Heimbucher, Mrs. Donald McLaughlin, and Mr. and Mrs. Langan Swent met at the Swent home to plan the project, and Professor Fuerstenau agreed to serve as Principal Investigator.

An advisory committee was selected which included representatives from the materials science and mineral engineering faculty and a professor of history of science at the University of California at Berkeley; a professor emeritus of history from the California Institute of Technology; and executives of mining companies.

We note with much regret the death of three members of the original advisory committee, all of whom were very much interested in the project. Rodman Paul, Professor Emeritus of History, California Institute of Technology, sent a hand-written note of encouragement just a few weeks before his death from cancer. Charles Meyer, Professor Emeritus of Geology, University of California at Berkeley, was not only an advisor but was also on the list of people to be interviewed, because of the significance of his recognition of the importance of plate tectonics in the genesis of copper deposits. His death in 1987 ended both roles. Langan Swent delighted in referring to himself as "chief technical advisor" to the series. He abetted the project from its beginning, directly with his wise counsel and store of information, and indirectly by his patience as the oral histories took more and more of his wife's time and attention. He completed the review of his own oral history transcript when he was in the hospital just before his death in 1992.

Thanks are due to other members of the advisory committee who have helped in selecting interviewees, suggesting research topics, and raising funds.

Unfortunately, by the time the project was organized several of the original list of interviewees were no longer available and others were in failing health; therefore, arrangements for interviews were begun even without established funding.

The project was presented to the San Francisco section of the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) on "Old-timers Night," March 10, 1986, when Philip Read Bradley, Jr., was the speaker. This section and the Southern California section provided initial funding and organizational sponsorship.

The Northern and Southern California sections of the Woman's Auxiliary to the AIME (WAAIME), the California Mining Association, and the Mining and Metallurgical Society of America (MMSA) were early supporters. Several alumni of the University of California College of Engineering donated in response to a letter from Professor James Evans, the chairman of the Department of Materials Science and Mineral Engineering. Other individual and corporate donors are listed in the volumes. The project is ongoing, and funds continue to be sought.

Some members of the AIME, WAAIME, and MMSA have been particularly helpful: Ray Beebe, Katherine Bradley, Henry Colen, Ward Downey, David Huggins, John Kiely, Noel Kirshenbaum, and Cole McFarland.

The first five interviewees were all born in 1904 or earlier. Horace Albright, mining lawyer and president of United States Potash Company, was ninety-six years old when interviewed. Although brief, this interview will add another dimension to the many publications about a man known primarily as a conservationist.

James Boyd was director of the industry division of the military government of Germany after World War II, director of the U.S. Bureau of Mines, dean of the Colorado School of Mines, vice president of Kennecott Copper Corporation, president of Copper Range, and executive director of the National Commission on Materials Policy. He had reviewed the transcript of his lengthy oral history just before his death in November, 1987. In 1990, he was inducted into the National Mining Hall of Fame, Leadville, Colorado.

Philip Bradley, Jr., mining engineer, was a member of the California Mining Board for thirty-two years, most of them as chairman. He also founded the parent organization of the California Mining Association, as well as the Western Governors Mining Advisory Council. His uncle, Frederick Worthen Bradley, who figures in the oral history, was in the

first group inducted into the National Mining Hall of Fame, Leadville, Colorado, in 1988.

Frank McQuiston, metallurgist, vice president of Newmont Mining Corporation, died before his oral history was complete; thirteen hours of taped interviews with him were supplemented by three hours with his friend and associate, Robert Shoemaker.

Gordon Oakeshott, geologist, was president of the National Association of Geology Teachers and chief of the California Division of Mines and Geology.

These oral histories establish the framework for the series; subsequent oral histories amplify the basic themes.

Future researchers will turn to these oral histories to learn how decisions were made which led to changes in mining engineering education, corporate structures, and technology, as well as public policy regarding minerals. In addition, the interviews stimulate the deposit, by interviewees and others, of a number of documents, photographs, memoirs, and other materials related to twentieth century mining in the West. This collection is being added to The Bancroft Library's extensive holdings.

The Regional Oral History Office is under the direction of Willa Baum, division head, and under the administrative direction of The Bancroft Library.

Interviews were conducted by Malca Chall and Eleanor Swent.

Willa K. Baum, Division Head
Regional Oral History Office

Eleanor Swent, Project Director
Western Mining in the Twentieth
Century Series

December 1993
Regional Oral History Office
University of California, Berkeley

Western Mining in the Twentieth Century Oral History Series
Interviews Completed, April 1995

Horace Albright, Mining Lawyer and Executive, U.S. Potash Company, U.S. Borax, 1933-1962, 1989

Samuel S. Arentz, Jr., Mining Engineer, Consultant, and Entrepreneur in Nevada and Utah, 1934-1992, 1993

James Boyd, Minerals and Critical Materials Management: Military and Government Administrator and Mining Executive, 1941-1987, 1988

Philip Read Bradley, Jr., A Mining Engineer in Alaska, Canada, the Western United States, Latin America, and Southeast Asia, 1988

Catherine C. Campbell, Ian and Catherine Campbell, Geologists: Teaching, Government Service, Editing, 1989

William Clark, Reporting on California's Gold Mines for the State Division of Mines and Geology, 1951-1979, 1993

James T. Curry, Sr., Metallurgist for Empire Star Mine and Newmont Exploration, 1932-1955; Plant Manager for Calaveras Cement Company, 1956-1975, 1990

J. Ward Downey, Mining and Construction Engineer, Industrial Management Consultant, 1936 to the 1990s, 1992

Hedley S. "Pete" Fowler, Mining Engineer in the Americas, India, and Africa, 1933-1983, 1992

James Mack Gerstley, Executive, U.S. Borax & Chemical Corporation; Trustee, Pomona College; Civic Leader, San Francisco Asian Art Museum, 1991

Robert M. Haldeman, Managing Copper Mines in Chile: Braden, CODELCO, Minerec, Pudahuel; Developing Controlled Bacterial Leaching of Copper from Sulfide Ores; 1941-1993, 1995

John F. Havard, Mining Engineer and Executive, 1935-1981, 1992

Wayne Hazen, Plutonium Technology Applied to Mineral Processing; Solvent Extraction; Building Hazen Research; 1940-1993, 1995

George Heikes, Mining Geologist on Four Continents, 1924-1974, 1992

Helen R. Henshaw, Recollections of Life with Paul Henshaw: Latin America, Homestake Mining Company, 1988

Homestake Mine Workers, Lead, South Dakota, 1929-1993, interviews with Clarence Kravig, Wayne Harford, and Kenneth Kinghorn, 1995

Lewis L. Huelsdonk, Manager of Gold and Chrome Mines, Spokesman for Gold Mining, 1935-1974, 1988

James Jensen, Chemical and Metallurgical Process Engineer: Making Deuterium, Extracting Salines and Base and Heavy Metals, 1938-1990s, 1993

Arthur I. Johnson, Mining and Metallurgical Engineer in the Black Hills: Pegmatites and Rare Minerals, 1922 to the 1990s, 1990

Evan Just, Geologist: Engineering and Mining Journal, Marshall Plan, Cyprus Mines Corporation, and Stanford University, 1922-1980, 1989

Robert Kendall, Mining Borax, Shaft-Freezing in Potash Mines, U.S. Borax, Inc., 1954-1988, 1994

Plato Malozemoff, A Life in Mining: Siberia to Chairman of Newmont Mining Corporation, 1909-1985, 1990

James and Malcolm McPherson, Brothers in Mining, 1992

Frank Woods McQuiston, Jr., Metallurgist for Newmont Mining Corporation and U.S. Atomic Energy Commission, 1934-1982, 1989

Gordon B. Oakeshott, The California Division of Mines and Geology, 1948-1974, 1988

James H. Orr, An Entrepreneur in Mining in North and South America, 1930s to 1990s, 1995

Vincent D. Perry, A Half Century as Mining and Exploration Geologist with the Anaconda Company, 1991

Carl Randolph, Research Manager to President, U.S. Borax & Chemical Corporation, 1957-1986, 1992

John Reed, Pioneer in Applied Rock Mechanics, Braden Mine, Chile, 1944-1950; St.Joseph Lead Company, 1955-1960; Colorado School of Mines, 1960-1972, 1993

Joseph Rosenblatt, EIMCO, Pioneer in Underground Mining Machinery and Process Equipment, 1926-1963, 1992

Simon Strauss, Market Analyst for Non-ferrous Metals and Non-metallic Minerals, Journalist, Mining Corporation Executive, 1927-1994, 1995

Langan W. Swent, Working for Safety and Health in Underground Mines; San Luis and Homestake Mining Companies, 1946-1988, 1995

James V. Thompson, Mining and Metallurgical Engineer: the Philippine Islands; Dorr, Humphreys, Kaiser Engineers Companies; 1940-1990s, 1992

Interviews in Process

Norman Cleaveland, Pacific Tin Corporation
Donald Dickey, Oriental Mine
Frank Joklik, Kennecott
Marian Lane, mine doctor's wife
John Livermore, geologist
McLaughlin Mine, model for resource development
Simon Strauss, Asarco, metals market analyst

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Vice President (retired), Homestake Mining Company

* Deceased during the period of the project

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INTRODUCTION to Langan Swent, by Richard J. Stoehr

It was in New Mexico, the summer of 1956, when I first met Langan W. Swent. He had been assigned the task of preparing a feasibility report for Homestake Mining Company. The report was to be used to obtain bank financing for a new large uranium mining project located in the Ambrosia Lake District of New Mexico. I had been working on the project for some time and it was necessary for Langan to prepare most of the required information from data that I had gathered during the preceding six months.

Immediately upon starting his activities, Langan began questioning almost every aspect of the work which had been done prior to his involvement. At first I was somewhat on the defensive, and in fact, a bit annoyed with his detailed probing. However, over the next thirty-five years I grew to greatly appreciate his keen mind and thorough study of each and every important matter. His ability to question and understand all aspects of our new undertaking resulted in a report which convinced the bankers to make a sizable loan taking only the new project as security. This was a substantial accomplishment indeed and well appreciated by the directors of Homestake Mining Company. Langan managed the construction and operation of this uranium venture for the next eleven years.

At the time we met, Langan had just completed an assignment at the Homestake Mine in Lead, South Dakota where he had developed new and unique ventilation plans for the deep, hot levels of that mine. While at the Homestake Mine, he cultivated a substantial interest in the subject of mine employee health and safety. He produced a safety training film which those in the mining industry considered to be preeminent. His interest in mine health and safety remained with him all of his professional life. He became recognized as a world expert in the radiation effects on underground miners and was asked to give testimony before the U.S. Congress as laws were established governing radiation work exposure limits.

Langan applied his analytical skills in many other mining ventures. During thirty-five years, we worked together on mining projects in Peru, Australia, Canada and of course, in the United States. We spent many evenings together and had ample occasion to visit. There were reflections on our activities during World War II when Langan related some fascinating stories of the invasion of Italy when he commanded a flotilla of LCT's (landing craft tank) which was involved in the initial Allied landing at Sicily, Salerno and Anzio. On occasions several of us would spend our evenings visiting about our dreams of the future. Langan was always extremely sensible and practical in his ideas and would keep us all firmly planted on the earth.

Many times, after seeing Langan grapple with a particularly perplexing problem, perhaps lasting several days, I would walk into his office and find a twinkle in his eye and a barely perceptible smile, and would immediately know that he had arrived at a solution which satisfied him and made great sense. This was a very charming characteristic of his.

Langan enjoyed many warm friendships. All who worked with Langan considered him to have a truly analytical mind which made him a first class engineer. He was sincere and just in his dealings and respected by all. It was a privilege to have shared so much of life's time with Langan and to have learned so much from him.

Richard J. Stoehr
Consultant to the Chairman and Chief Executive Officer, Homestake Mining Co.

April 1994
Belvedere, California

INTERVIEW HISTORY--by Malca Chall

Langan Swent's entire working life was mining, most of it associated with the Homestake Mining Company. No oral history of the California mining industry would be complete without this broad and fascinating account of his seventy-five year alliance with it. Except for his seven years in Mexico (1947-1954), he was actively engaged in Homestake's endeavors in the United States, Peru, and Australia.

Possessed of a keen intellect, a spirit of adventure, and a strong motivation to succeed, he experienced almost every aspect of mining, from labor in the pits to the heights of management. As the table of contents and the index to this volume indicate, this sixty-hour oral history is a highly detailed and structured examination of Lang's life and his 30-year career with Homestake.

The history begins with his childhood in Tayoltita, Mexico, where his father managed the San Luis Mining Company. Young Lang learned Spanish from his Mexican playmates and company staff, and received his elementary schooling from his mother. Here, influenced by his parents, and the Tayoltita community, he developed the special qualities of character, honed throughout his highly productive life: a strong work ethic, deeply held feelings of responsibility and loyalty toward family, friends, and co-workers, and a commitment toward community betterment wherever he lived.

We follow Lang through high school and college, his harrowing wartime experiences commanding landing craft tanks in Africa, Italy, and France, then on to his career with Homestake. He gradually moved up the management ladder, with assignments in Lead, South Dakota, and Grants, New Mexico, where he assumed management of Homestake's uranium partnerships. Finally, we find him at company headquarters in San Francisco, where he took on a wide variety of projects at home and abroad. From 1983 when he retired, until his death in 1992, he worked tirelessly for Homestake and the American Mining Congress, endeavoring to set practicable federal standards for radiation in the mines.

Twenty-nine two-hour sessions were recorded between June 19, 1987, and August 12, 1988, usually paced at weekly intervals. We met in the small book-lined study of Lee and Langan Swent's large and comfortable home in Piedmont, California, a room in which they spent evenings reading, listening to music, or watching television. Prior to each interview, Lang had gathered and placed within reach reports, calendars, diaries, photographs, or other memorabilia relevant to the session topic.

He worked at the oral history as methodically and comprehensively as he had obviously tackled his previous assignments. Sometimes he wished

to elaborate on topics we had discussed earlier, and occasionally asked that we turn off the recorder so that he could consider how to move on. The inevitable repetition, we agreed, could be removed from the transcript; the essential elements would be in place.

Lang was articulate and serious, but also humorous as he recalled amusing incidents. He had traveled throughout the world often to places rarely seen by the average traveler, and these experiences he described with the same wonder and emotion he might have felt the first time. Whatever the story, he always took pains to explain carefully its complexities.

As might be expected in a lengthy oral history, editing the transcript and dividing it into manageable chapters with suitable titles and subtitles required time, patience, and analysis by Lang and me. To cope with diverse material, those chapters dealing with Grants (Chapter IX) and corporate headquarters (Chapter XI) were divided into sections, each dealing with a specific topic. Some parts of the interviews were rearranged in order to maintain the chronology.

Lang received the first edited chapters in February 1988, returning them and those which followed at varying intervals. He was reviewing Chapter XI several weeks before his death on April 30, 1992. He carefully scrutinized each chapter, checking the spelling of names and places, and inserting information in longhand or by typewriter. These additions, if longer than a couple of sentences, are marked by brackets.

The volume includes a few samples of the source material used for research. The deposition of the collection has not yet been decided by Lee Swent. Richard Stoehr, one of Langan Swent's long-time friends and colleagues, agreed to write the introduction. I had contacted and met with Mr. Stoehr shortly after beginning the interview, seeking background on Lang and his career beyond what was in his resumes. Mr. Stoehr provided valuable sidelights and insights on their years together with Homestake. He also correctly predicted that Lang, always in character, would use his careful approach to gathering and imparting information for the oral history, and thus relieve me as the sole source for research into this complex subject. Despite a busy schedule, Mr. Stoehr wrote for this volume an insightful perspective on Lang as an individual and as an administrator. We are grateful for this act of friendship.

This two-volume oral history of Langan and Lee Swent has been made possible by the donors to the Western Mining in the Twentieth Century Oral History Project, whose names are listed in the preceding pages. We gratefully acknowledge their interest and anticipate that this oral

history will be a valuable research tool for students of the mining industry, of Homestake Mining Company, and of the many men and women who have made and will continue to make careers in this major American industry.

Malca Chall
Senior Editor

May 17, 1995
Regional Oral History Office
The Bancroft Library
University of California, Berkeley

CURRICULUM VITAE

1. Name: Langan Waterman Swent

2. Birth: November 27, 1916, Oakland, California

3. Higher Educational Institutions Attended:

1934-1938:	Stanford University, Stanford, California. Awarded B.A. in Engineering degree.
1939-1940:	University of California, Mining School, Berkeley, California.
1940-1941:	Harvard University, Department of Geology, Cambridge, Massachusetts.
1942:	Northwestern University Naval Officers Training School, Chicago, Illinois. (2 months.)
1962:	University of Arizona Short Course on Use of Computers in the Mineral Industry. (1 week.)

4. Work Chronology:

1933-1934:	Engineer and geologist's helper, Guanacevi Mining Company, Guanacevi, Durango, Mexico.
1939:	Geologist's helper, San Luis Mining Company, Tayoltita, Durango, Mexico. (9 months.)
1940:	Dust Counter, Permanente Cement Company, Los Altos, California. (3 months.)
1941:	Metallurgical Laboratory Researcher for methods to analyze for small quantities of mercury and tin in potential ores, and exploration geologist's helper in Baja California gold placer evaluation, San Luis Mining Company, San Francisco, California, and La Paz, Baja California, Mexico, and acting as U.S. naval civilian intelligence agent.(6 months.)
1946-1947:	Laborer and miner in engineering training program, Homestake Mining Company, Lead, South Dakota.
1947:	Assistant to consulting metallurgist, San Luis Mining Company, Tayoltita, Durango, Mexico.(2 months.)
1947:	Contract miner and shaftman in engineering training program, Homestake Mining Company, Lead, South Dakota (3 months.)
1947-1954:	Mine foreman, then assistant manager, San Luis Mining Company, Tayoltita, Durango, Mexico.
1954-1957:	Assistant to General Manager, Homestake Mining Company, Lead, South Dakota.
1957-1959:	Manager, New Mexico Division, Homestake Mining Company, Grants, New Mexico.

1959-1962: Manager, Homestake-Sapin Partners, Homestake Mining Company, Grants, New Mexico.

1962-1966: General Manager, Homestake-Sapin Partners and Vice President, Homestake Mining Company, Grants, New Mexico.

1966-1970: Vice President, Uranium and Clay Products, Homestake Mining Company, San Francisco, California.

1970-1975: Vice President - Operations, Homestake Mining Company, San Francisco, California.

1975-1981: Vice President - Engineering, Homestake Mining Company, San Francisco, California.

1981-1983: Vice President - Environmental Affairs and Occupational Health and Safety, Homestake Mining Company, San Francisco, California. Retired from Homestake Mining Company on 30 June 1983.

1983- Consultant in Occupational Health and Safety in Mining, Piedmont, California.

5. Military Service:

1941-1942: Naval Civilian Intelligence Agent, then U.S. Naval Reserve Commissioned Officer (Rank: Ensign) in Internal Security Office of 12th U.S. Naval District, San Francisco, California.

1942-1943: Reassigned due to request for sea duty. Two months at Northwestern University Naval Reserve Officers Training School, then 2 months training in amphibious landing craft in Chesapeake Bay, then 5 Months ferrying LCT(5) landing craft from Manitowoc, Wisconsin, via Great Lakes, N.Y. State Barge Canal, and Hudson River to New York.

1943-1944: Officer-in-Charge of LCT(5)-435 and later of LCT(5)-224 in Mediterranean Theatre of Operations. Participated in initial assault landings and later in beachhead support activites in amphibious landings in Sicily, Salerno, and Anzio. (Rank of Lieutenant, Jr. Grade Achieved in Late 1943.)

1944: Reassigned, First to Group Commander 12 LCT(5)s, then to Flotilla Commander (38 LCT(5)s and LCT(6)s), then to LCT Task Force Commander in invasion of southern France, then Naval Amphibious Training Base, Little Creek, Virginia. (Rank of Lieutenant Achieved.)

1945: Reassigned as Officer in Charge of Camp 4 at Naval Amphibious Training Base, Fort Pierce, Florida. Released to Inactive Duty in September, 1945.

1956: Retired from U.S. Naval Reserve with rank of Lt. Commander.

6. Non-military Government Service:

1960: Appointed by Governor Burroughs of New Mexico to serve on Governor's Special Committee on Safety in Uranium Mines.

1961-1967:	Appointed by Governor Mechem of New Mexico to serve as a Member and Chairman of the New Mexico Delegation to the Western Governors Mining Advisory Council.
1967-1968:	Appointed by the Atomic Industrial Forum to serve as a member on The Federal Radiation Council Task Group for Review of Progress in Radiation Protection Practices in Uranium Mines.
1983:	Engaged by NIOSH as consultant to review revision of June 1980 report on "The Risk of Lung Cancer Among Underground Miners of Uranium-Bearing Ores."

7. Non-Governmental Service:

1955-1957:	Member of Kiwanis Club of Lead, South Dakota.
1957-1966:	Trustee of New Mexico Joint Council for Economic Education.
1957-1966:	Director, West Valencia County Health & Welfare Coordinating Council.
1957-1966:	Member, Grants and West Valencia County Chamber of Commerce.
1958-1966:	Trustee, Cibola General Hospital Corporation, Grants, New Mexico. (Chairman of the Board of Trustees 1958-1960.)
1960-1966:	Trustee, Surgical Service, Inc.(New Mexico Blue Shield) (Secretary & Treasurer 1964-1666.)
1967-1968	Chairman, Fathers Committee, Troop 1, Piedmont Council, Boy Scouts of America.
1970-1975	Member, Occidental College Parents Committee. (Chairman, 1973-74.)
1984-	Member, Rotary Club of Oakland, California.

8. International Service:

1968	U.S. Employer Delegate to International Labor Organization Second Tripartite Meeting for Mines Other than Coal Mines in Geneva, Switzerland.

9. Religious Service:

1963-1966:	Trustee and Secretary, First Methodist Church of Grants, New Mexico.
1968-1971:	Trustee and Treasurer, Piedmont Community Church, Piedmont, California.
1972-1973:	Member Board of Stewards, Piedmont Community Church, Piedmont, California.
1973-1974	Member. Finance Committee, Piedmont Community Church, Piedmont, California.

10. Corporate Directorships:

1961-1966:	First National Bank of Grants, Grants, New Mexico.
1968-1977:	Banco Occidental de Mexico, S.A., Mazatlan, Sinaloa, Mexico.

11. Awards and Honors:

1933:	Graduated from Preparatory School Cum Laude
1938:	Elected to Tau Beta Pi, Honorary Engineering Scholastic Society, at Stanford University.
1944:	Given Letter of Commendation by Vice Admiral H.K Hewitt for Services in Action in Mediterranean Theatre of Operations. Awarded Legion of Merit Medal for Conduct Under Enemy Fire at Anzio Beachhead. LCT(5)-224 Awarded Presidential Unit Citation for Actions Under Sustained Enemy Fire in Support of Anzio Beachhead.

12. Professional and Business Memberships:

1941-	American Institute of Mining, Metallurgical, and Petroleum Engineers.
1956-	Mining and Metallurgical Society of America.
1958-	New Mexico Mining Association (President 1962-1963; Chairman, Finance Committee 1964-1966.)
1963-1964:	Western Board of Governors, American Mining Congress.
1964-	Non-Coal Mine Safety Committee, American Mining Congress.
1967-1983:	N13, Committee on Radiation Protection, American National Standards Institute.
1967-	Engineers Club of San Francisco.
1967-	World Trade Club, San Francisco.
1967-	Commonwealth Club of California, San Francisco.
1967-1983:	Colorado Mining Association.
1967-1983:	Utah Mining Association.
1968-	Stock Exchange Club, San Francisco.
1968-1975:	Executive Committee, Uranium Advisory Council, American Mining Congress.
1972-	Chairman, Subcommittee on Radiation, Atomic Industrial Forum Mining and Milling Committee.
1975-	Uranium Environmental Subcommittee, American Mining Congress.
1976-	Occupational Health Committee, American Mining Congress.
1976-	Resolutions Committee, American Mining Congress.
1978-1983:	Director, California Mining Association.
1978-1983:	Comingled Tailings Committee, American Mining Congress.
1979-1982:	Carcinogens Subcommittee, American Mining Congress.
1980-	Environmental Matters Committee. American Mining Congress.
1980	Program Committee, American Mining Congress.
1980-	Chairman, Uranium Mine Health Subcommittee, American Mining Congress.

13. Biographical Listings:

1967-1970	Who's Who In the West.
1981-1982	Who's Who In California.

14. Appearances Before Governmental Bodies.

1965:	Testified in Washington, D.C. on May 6 before the Select Subcommittee on Labor of the U.S. House Commitee on Education and Labor hearings on mine safety.
1966:	Testified in Washington, D.C. on March 22 before the Subcommittee on Labor of the U.S. Senate Committee on Labor and Public Welfare hearings on mine safety.
1967	Testified in Washington, D.C. on June 8 before the Subcommittee on Research, Development, and Radiation of the Joint Committee on Atomic Energy of the U.S. Congress hearings on "Radiation Exposure of U.S. Uranium Miners" and was invited by the Subcommittee to be a member of the "Roundtable Panel" of 12 persons that appeared before the Subcommittee on July 26 and 27 to give additional testimony and discussion.
1969	Testified in Washington D.C. on March 18 before the Subcommittee on Research, Development, and Radiation of the Joint Committee on Atomic Energy of the U.S. Congress hearings on "Radiation Standards for Uranium Mining."
1977:	Testified in Washington, D.C. on March 29 before the Subcommittee on Compensation, Health and Safety of the U.S. House Committee on Education and Labor hearings on mine safety.
1977:	Testified in Washington, D.C. on March 30 before the Subcommittee on Labor of the U.S. Senate Committee on Human Resources hearings on mine safety.
1979	Testified in Grants, New Mexico, on August 20 at hearings held by the U.S. Senate Special Committee on Aging on "The Impact on Older Workers of Occupational Health Hazards: What Is Being Done to Address The Health Needs of Older Workers?".

15. Technical Papers and Publications.

1956-1984	Numerous technical papers and talks on gold and uranium mining and milling.
1971:	Problems in Meeting Underground Environmental Standards. Am. Mining Congress Jrnl., Vol.57, No.1, January 1971.
1981:	Statement of Principles. Radiation Hazards in Mining: Control, Measurement, and Medical Aspects, Gomez, M., Editor, Society of Mining Engrs. of Am. Inst. of Mining, Metallurgical and Petroleum Engrs., New York, N.Y., 1981

Langan Waterman Swent dies

Piedmonter, May 12, 1992

Langan Waterman Swent, a ongtime resident of Piedmont, lied April 30 at the age of 75.

A third-generation Californian, Swent was born Nov. 27, 1916, he son of Mr. and Mrs. James Swent, also of Piedmont. He was aised in Tayoltita, Durango, Mexco, where his father was manager for the San Luis Mining Co.

He graduated from the Moses Brown School in Providence, R.I. (Swent was a descendent of Richard Waterman, a founder of Providence in the 17th century.) He graduated from Stanford University in 1938, where he was the manager of the *Stanford Daily* and a member of Theta Delta Chi and Tau Beta Pi.

After graduation, he went on to study mining at UC-Berkeley and geology at Harvard University.

Before World War II, Swent worked for the Office of Naval Intelligence. He joined the Navy immediately after the attack on Pearl Harbor and served in the amphibious forces in the Mediterranean theater during the war.

He commanded a flotilla of landing craft and took part in the invasions of Sicily and Southern France. He was awarded the Legion of Merit for bravery at Anzio and held the rank of lieutenant at the end of the war.

In 1946 he moved to Lead, S.D., to work for the Homestake Mining Co. There he met and married Eleanor Herz. The next year he returned to Tayoltita, as assistant manager for the San Luis Mining Co. In 1954 he moved back to Lead, S.D., as assistant to the manager of Homestake Mining.

After the discovery of uranium in New Mexico, Swent moved to Grants, N.M., in 1957, where he was manager of the mining and milling operations for Homestake. He stayed there until 1966, when he moved to Homestake's headquarters in San Francisco.

Thereafter he was vice president of operations, of engineering, and of environmental affairs. He retired in 1983 after 30 years service with Homestake.

Throughout his career, Swent had a strong interest in improved health conditions for miners. He was a member of the Uranium Policy Council of the American Mining Congress and served on numerous environmental and health and safety committees.

He was an advisor to the Hanford Environmental Health Foundation and to the University of New Mexico epidemiological study of lung cancer.

He was a member of many professional societies, as well as the City Club of San Francisco, the World Trade Club of San Francisco, the Commonwealth Club, the Oakland Rotary Club No. 3 and the Piedmont Community Church.

Swent is survived by his wife, Eleanor; three children, Richard Swent, Christine Swent Byrd and Jeannette Swent; six grandchildren; and his brother, James Swent Jr. He was predeceased by a son, Jay Kimpston Swent.

A memorial service was held May 2. Friends who wish to make memorial donations are asked by the family to direct them to the endowment fund of Piedmont Community Church (400 Highland Ave.) or the James Waterman Swent Scholarship Fund of the American Institute of Mining, Metallurgical and Petroleum Engineers (c/o Mrs. A.D. Taylor, 1450 Piedra Drive, Walnut Creek, 94596) or the Regional Oral History Office of UC-Berkeley's Bancroft Library (c/o of the library, Berkeley, 94720).

OAKLAND TRIBUNE

MAY 1, 1992

SWENT, Langan in San Francisco, on April 30, 1992; age 75. Survived by his wife Eleanor of Piedmont; daughters Christine Byrd and Jeannette Swent; son Richard Swent; six grandchildren and brother James Swent. Mr. Swent was the Vice President (Retired) of Homestake Mining Company; member of Engineers Club, City Club, World Trade Club, Oakland Rotary =3, and the Piedmont Community Church.

Friends are invited to attend the Memorial service on Saturday, May 2, at 1:00 P.M. at the Piedmont Community Church. Family requests in lieu of flowers, donations to Piedmont Community Church Endowment Fund, 400 Highland Way, Piedmont, CA 94611; James Swent Sr. Scholarship Fund of Woman's Auxiliary of AIME, c/o Mrs. A.D. Taylor, 1450 Piedra Dr., Walnut Creek, CA 94596; or Regional Oral History Office, Bancroft Library, Berkeley, CA 94720; or charity of one's choice.

I FAMILY BACKGROUND

Grandparents

[Interview 1: June 19, 1987] ##[1]

Chall: Today we're going to talk mainly about your family. I thought we could start knowing a little bit about your parents. But before we get to them, maybe you should tell me where you were born and when. Then we'll talk about your parents.

Swent: All right. I'm Langan Swent. My middle name is Waterman. I was born in Oakland, California, November 27, 1916. My mother was Ursula Swent and my father was James Waterman Swent. My mother's parents were George Langan and Ella Mendenhall. My father's parents were Rudolph Swent and Amy Swent. Her maiden name was Amy Waterman. Rudolph, Grandpa Ru's name was also Gschwind, which was my great-grandfather's name when he emigrated from Switzerland in 1850. It was Americanized to Swent. My grandfather Rudolph used that name until after my father was born, and that was my father's name. Then he and Amy were divorced, and he went then back to the Gschwind name and lived as Rudolph Gschwind until he died.

Chall: Where did they come to this country from Switzerland?

Swent: My great-grandfather, Remig Gschwind--the first record I have of him was in Cincinnati in 1852. I have a letter that he wrote home in German. Then in 1860, he returned to Switzerland and married a girl in his home town, the town of Metzerlen, about thirty

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[1] ## This symbol indicates that a tape or segment of a tape has begun or ended. A guide to the tapes follows the transcripts.

kilometers from Basel. Then they returned to the United States, and he came to California and settled in San Francisco.

Chall: What was he planning to do?

Swent: I really don't know what sort of work he did. My grandfather Ru was a butcher but fortunately invested in a firm that eventually got to be-- Golden State Creameries, I think, was the name. Later on that was absorbed into Foremost, and that into Foremost-McKesson. So he made a great deal of money on the Golden State stock, although he had a hard time during the Depression. But in the years that I really knew him, he was not doing any butchering. He had retired and was living at home with his second wife.

Chall: Living in San Francisco?

Swent: No. He moved to Alameda. They had lived in San Francisco at one time, and my father was born in San Francisco, and was there, for instance, during the earthquake. I remember his talking about some of his earthquake experiences. Later, I think as a result of the earthquake, they moved over to Alameda.

I have some papers of my great-grandmother, the one that Remig married in Switzerland. Her name was Clara Mattile. She and Remig bought the house--I think it was on Valencia Street in San Francisco. During the earthquake, as a result of the fire, all the county records in San Francisco were burned and destroyed, and there was no record of their title to the house. Everybody else was in the same fix. So San Francisco set up a procedure after the fire for people to apply for reissuance of their title, and I have those documents. That was my grandfather's mother. Remig had died, I think, by the time of the earthquake.

Chall: Your grandfather, then, was born in--

Swent: He was born in San Francisco.

Chall: Your grandfather married Amy.

Swent: Yes. She was from Sacramento. Those were my father's parents. On my mother's side--my mother's maiden name was Ursula Langan. Her father was a lawyer and a judge. They lived in Oakland on Fairmount Avenue, in the four hundred block of Fairmount Avenue, which has now been wiped out by the MacArthur freeway. The house where they lived no longer exists. Well, no houses exist there. The I-580 freeway has gone through there.

George Langan was a Civil War veteran. He had been in the Civil War--he went in with another boy when he was sixteen. He was

under age, but he lied about his age. He was living in Michigan; that's where he was raised. I remember he used to tell me some of his experiences in the Civil War. He had a little book that he filled out afterwards as a veteran and gave some of these experiences, which I think I have in the basement. I'm not sure.

In later years he had some sort of accident. I never did hear the full story of what happened. But it was an accident on a railroad, and both of his legs had been amputated below the knee. He had wooden legs. They were very good. I remember he used to take them off in the evening and rub the stumps. He would wiggle them and rub them because the circulation was kind of poor down at the bottom of the stumps. He was a very, very nice gentleman.

His wife Ella--her maiden name was Ella Mendenhall--was one of ten children of William Mendenhall, who was an extraordinary character. He lived in Livermore at the time that most of these children were born. My mother had lived in Livermore until she was ten or twelve, and their house in Livermore burned down. That was when they moved to Oakland.

Chall: What was he doing in Livermore?

Swent: He was a lawyer. William Mendenhall came across the plains in 1845, and he had quite a few adventures. Crossing a river (I'm not sure what river it was) on a boat, the boat sank, and they lost just about everything they had. They had to swim ashore, but they did save the mules. So they were able to get started again, and they went on. Near Laramie they were attacked by Indians, but again, came through that. Then they came on through to California but ran very low on supplies. He was sent ahead of the group to see if they could find supplies. They were just virtually starving when somebody found them about three miles from Sutter's Fort.

His wife was named Mary Allen. Allen, I think, was the last name. She came across a year later, and had a less adventurous time in getting across. I have no idea how they met. But they were married in April of 1847, and they were the first Americans to be married in this local three-county area: Contra Costa, Alameda, and Santa Clara counties.

Then he wandered around. He moved to Oregon; they lived up there for a number of years and finally decided to come back to California. He organized a team of wagons; I think there were thirty-some-odd wagons that made their way down from Oregon to California again, to the San Francisco area. He lived in the Santa Clara county area for several years, and then moved to the Livermore area. The first place he tried to settle on--I think it was called the Soto Ranch, or Soto Property, and he had to leave

there. But he found there was a big block of six hundred-and-some-odd acres for sale which he bought. So he became a big landowner in the area.

Chall: Was that in the Livermore area?

Swent: Yes. He gave thirty-five acres of that to the Southern Pacific Railroad for a railroad station in Livermore. Just a few years ago the Southern Pacific Railroad gave it up and sold it. It's now been made into a restaurant. I guess he tried mining in the 1849-50 period, but he didn't do very well at that. He did better--when he started selling clothes to the Indians, and he did very well on that and got paid in gold by the Indians in the Mother Lode, and made enough money to buy his land in the Livermore valley.

Chall: He was quite adventurous, and an entrepreneur. He went from the wagon train, to gold, to selling clothes. Then he finally settled down. Did he farm finally in Livermore, or ranch?

Swent: I imagine it was mostly ranching. I never heard of any farming.

Chall: Probably ranching. You have really come from pioneer stock in the Bay Area, haven't you?

Swent: Yes. Now, the Waterman name on my father's side goes back a long, long ways. Actually the Waterman name came from Richard Waterman who was a young deer hunter that the Massachusetts colony brought over to hunt deer, because deer were a pest to their crops. He was about twenty or twenty-one when he came over from England, and he didn't get along very well, apparently, with the Massachusetts colony.

When Roger Williams decided to leave the colony and go down on his own, he took twelve people with him, and Richard Waterman was one of the twelve. They went down and started the Providence Plantations settlement which then developed into Rhode Island and the city of Providence. One book I read on it said that the worst mistake Roger Williams made was in taking Richard Waterman with him. [laughs]

Chall: He must have been a difficult man no matter where he was.

Swent: Well, they had lots of arguments over land, and how to develop the city, and all this sort of thing. But the Watermans apparently became one of the major families in Providence, and there's a Waterman Street in Providence today. It's one of the main streets downtown. There are still Watermans there. One Waterman came West--James Waterman came to California and settled in Sacramento. That's where Amy and her sister Molly "Dat" Waterman were raised.

I have no idea how my grandfather met Amy. We now have a granddaughter who is named Amy--Amy Waterman Byrd.

Parents

Chall: You've carried those names right through, haven't you? Did Amy have just one son when they were divorced?

Swent: Yes. My grandfather was divorced--and I don't know just what year it happened.

Chall: That son was your father?

Swent: Yes, that son was my father.

Chall: That was their only child?

Swent: Right. He had no brothers or sisters. Then she moved to Oakland, and lived in Oakland while Dad went to high school. Then she moved to Peoria, Illinois. My father went with her. He resented this divorce greatly. He did not take it well. He took his mother's side and was very upset over it. I don't know what the reasons were for the divorce. Later Grandpa Ru remarried. His new wife was Alice Frazier from Pennsylvania, but they had no children. Alice was a very nice, kind lady and it was probably through her efforts that Dad in later years was reconciled to his dad. At the time of his remarriage, Grandpa Ru changed his name from Swent to Gschwind, his father's Swiss name. Alice outlived Grandpa Ru, by almost twenty-four years. She lived to be ninety-nine, died in 1960. She and Dad got along very well and all my family liked her. In fact, we gave our youngest child, Jeannette, Frazier as a middle name.

Anyway, Amy and Dad moved to Peoria. My father by then had finished high school in the Oakland area. He had gone to Oakland High. While there he became acquainted with a cartoonist at the Oakland Tribune who drew an early comic strip called "Little Jimmy." He taught Dad watercolor painting. Later Swinnerton moved up in the newspaper world and went to a New York paper. There his health failed and he had to retire to Arizona where he took up painting Southwest scenery and became a famous artist, living into his nineties. We have two prints of one of his works.

In Peoria Dad had various jobs. He raised bull dogs, for sale, and trained them. I've seen pictures that he had of some of

the dogs and that sort of thing. He apparently did other things; I'm not sure what they were.

Then he enrolled in the University of Illinois and went one year there. I don't know who it was--somebody talked him into taking mining engineering. So he transferred to what is now called Michigan Tech. It was then called Michigan School of Mines, in Houghton, Michigan. At some point, I think it was while he was at Illinois, he had some trouble with algebra and got some tutoring. The person who tutored him was [Charles] Steinmetz, who was in a way a genius, a mathematician. I know my dad later told me about how he could do differential equations and calculus problems all in his head, which most people have to do on a blackboard or piece of paper.

Chall: That Steinmetz was his tutor?

Swent: Yes.

Chall: For his algebra?

Swent: My dad told me this when he was tutoring me in algebra. [laughs] I had to be tutored at one time. But once he'd done it, it just stayed with me forever. I enjoy it today, enjoy algebra. Anyway, that's how he got into mining. He graduated from Michigan School of Mines, I think in 1911, and then went to work. I think at that time his mother came back to Oakland and lived here in Oakland.

Chall: She never remarried?

Swent: No, she didn't remarry. Apparently, she, for a while, went back to singing. She and her sister were singers, contraltos. We have this poster that I've shown you, dated September 1898, featuring them in several performances, although it doesn't say in what city they were.

Chall: No. The only clue is that they are in front of the Morosco Theater.

What about Dat? That's an unusual name. Do you know anything about her?

Swent: Oh, yes. She married. She was my father's aunt. She was my great-aunt. She married a man named Joseph Racine. I never met him. I think he died fairly young, and she was widowed. Dat--actually, her name was Molly. At some point, and I don't know what stage of her life, somebody, as a practical joke, pulled a chair out from under her as she was sitting down. She fell and broke a hip. It didn't heal well, and for the rest of her life she had a

limp. It didn't hurt, but she just limped all the time. She was a very kindly soul. She lived a lot longer than Amy did. She lived until about 1946. I just barely remember Amy. I knew her and met her, but she died much younger than her sister did.

Chall: Was Amy the one you told me about, when I met you last week, who used to pray every day?

Swent: No. That was my grandmother Ella Mendenhall on my mother's side.

Chall: Well, we'll stay with your father's side. We have your father coming back with his mother to Oakland?

Swent: No. I think she came back first, and he went on to work in some mines in Canada. He worked in the Cobalt area, Cobalt, Ontario, in some very rich silver mines. That was a very rich silver mining district. He worked there for several years. This gets into how he and my mother met. Maybe we should go on into that.

Chall: Yes. That's fine.

Swent: My mother had two brothers, Phil and Thomas. Chester Thomas, actually, and they called him Chet, not Tom. They were older than she. They were in high school in Oakland when my dad was in high school, and they played football together on the Oakland High team. They had brought him home, and they'd met casually. My mother was still not in high school, was maybe thirteen or fourteen years old. He went away and was gone for years. She was living with her mother, and one day there was a knock at the door. She went to the door, and there was a sort of a gypsy there that said she would tell fortunes--she would read her fortune for her if she wanted her to. So for a lark she said, "Well, go ahead."

The fortune that she got was that--I think this was in February (this is what Mother said)--"You're going to meet the man of your future no later than April. He's twenty-nine, and is a lawyer." Well, she didn't think the lawyer part was accurate because she was thinking about my dad. She'd had some correspondence with him. The fortune teller said, "Well, I'm sure he's a lawyer, because I see him surrounded by maps."

I guess I started a little late in this story. Actually she had been asked by her brother Phil to go visit Amy, who was ill at the time, very sick. Phil had been visiting her, and she wanted to meet Phil's sister. Mother said, "Well, I've never met the woman. Why should I go up there?" He said, "Well, you'd do her a lot of good if you'd just come out and visit with her." So she did.

She was at that time planning a dance to be given at their house on Fairmount Avenue, and making up an invitation list. So she sent an invitation to my dad even though he was in Canada. Of course he didn't come, but he wrote right back. So they started a correspondence.

So, when this fortune teller said that she would meet the man of her future no later than in April, why, she began looking at it, and she wrote him about this. She said she was running out of things to say. So she wrote him about this fortune thing, and he said, well he didn't think he could get back here by April. But he did show up on April 29.

Chall: He was going to make that fortune come true. [laughs]

Marriage in Mexico and Settling in Candelaria

Swent: Yes. He had left his job in Canada, and he took some short-term jobs, I think, in Nevada, and then was around here for about a year. Then he took a job in Mexico.

Chall: They were married?

Swent: No. They weren't married. He took a job, went down there in early 1915 with a company called the Mexican Candelaria Company in the town of San Dimas, in the state of Durango in Mexico, way up in the Sierra Madre Mountains, some sixty-five miles northeast of Mazatlan on the coast. They were engaged, and the understanding was that if the job worked out, then he would send for her, and she would go down and they would be married. It all worked out that way. In early December or the very last day in November, I'm not sure, she took a Pacific Mail ship from San Francisco down to Mazatlan. It took days to get there, but the ship got there on the twenty-first of December. In those days in Mazatlan the ships couldn't dock. The harbor hadn't been dredged yet, and they had to go ashore in lighters. All the bags and everything--all the goods had to go on lighters to shore.

My dad met her on the ship. He came out to the ship and met her and said that they were to be married that same day. Then, when they got on to shore, somebody was asking for Mr. Swent there, and it turned out to be the vice-consul. He said, "You have to be married by 5:30 because the dispensation you have to be married expires after today. If you don't use it today, you'll have to publish banns and wait two weeks before you can be married." Being

foreigners, they had gotten the dispensation from the banns, but it was only through the end of that day.

So, they rushed off to the consulate. They met the American consul there, who asked Mother, "Do you want to wash up or bathe before the marriage?" It was about 5:00 then, so she decided she had better just wash her hands and get married. [laughs] The marriage was actually performed by Mexican officials. It was a civil Mexican wedding because church weddings were banned in Mexico at that time.

Chall: What was the year?

Swent: It was 1915.

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In the Mexican civil wedding ceremony, the three people, the official and the bride and groom, sit at a table. The bride and groom sit facing each other, and the civil official sits at the end of the table and speaks to the two of them and outlines the obligations and undertakings that they're taking on. My mother's record of it is that she didn't understand a word of it. She had just arrived in Mexico, she didn't know any Spanish. It's a long service. I've heard it; it's a long, long thing. It's much more detailed than our church weddings are as to the obligations of the husband and the wife and all that. At any rate, she said the first thing she understood was when he got up and said, "I now pronounce you man and wife," in sort of broken English.

There was an American boarding house in Mazatlan that my father took her to, and they were going to stay there. She was just beginning to get settled, and the word came that they were invited to a party, that the woman who ran the boarding house was going to throw a party for her wedding. She didn't want to go. She was tired. There had been too many events so far in the day; she just hadn't been prepared for all this and she just wanted to go to bed. But they finally prevailed on her to go to the party. I have no idea who the woman was or what her name was. Anyway, they had a very nice party and stayed up quite late.

Later this woman who ran the boarding house (she was American) said that it was too bad they arrived when they did, because there was a Methodist minister there who would do a church service for her, but that she would have to wait four or five days for him to come back. Mother took the attitude that she didn't want to do anything that would offend the Mexicans by getting married by an American minister again, intimating that they didn't think much of the Mexican marriage. So she decided not to do that.

They stayed on in Mazatlan for three for four days. They were going to start out for San Dimas by muleback. It was a five-day mule ride from Mazatlan. In those days they were building the railroad up and down the coast, what later was the Southern Pacific of Mexico, which ran from Nogales, Arizona down to Guadalajara. It was being built through to the north of Mazatlan. It was not yet completed all the way through; it wasn't connected to Nogales yet. But somebody said they could ride in their private car up the road to a station from where they could take their mules; that would save a day's ride on muleback. She had never ridden in a private car, but Dad told her to wear her riding clothes. She thought that was terrible, riding in a private railroad car in riding clothes.

They went down to the railroad station one morning, ready to go. She didn't see anything that looked like a private car. Finally they got taken on board a third-class wooden coach. That was the private car, and it was the only passenger car at the end of a construction train. [laughs] So, she decided that the clothes were adequate. They rode a couple of hours up the coast to--I think it was Dimas station, and they they rode in by muleback from there. It was a four-day trip.

Chall: Were there places along the way to stop for the night?

Swent: Yes. They carried bedding and cots, but no food. They depended on places where they stopped to furnish food. Most of these places were very poor. I stayed in them in later years. They were all very poor, but always very generous. And of course, you paid them for staying there and for the food.

Chall: These were private homes?

Swent: Well, they weren't even homes, really. They were generally little ranches or huts. The ranches had some substantial buildings on them, but a lot of them were just little structures made out of small trees and poles, that sort of thing, with thatched roofs. They weren't very substantial. A lot of them were seasonal and were located down in the river bed. The owners would stay in them during the dry season. You had to go up this winding river to get to San Dimas. Then in the wintertime when the rains came and the river rose, the owners would move up to higher ground and then come back down and rebuild their places in the next dry season. Sometimes the temporary buildings got wiped out in the rainy season.

Chall: It was pretty primitive. It was camping.

Swent: Oh, very; it was. It really was camping, in the truer sense of the word. They brought their own food because Dad wasn't sure whether

Mother would eat Mexican food or not. So he had brought some food along from Mazatlan, but her first attempt at Mexican food---why, she liked it very much. So they just ate the Mexican food.

Chall: She wasn't ill?

Swent: No. It was beans and tortillas, and we always love those. Then the trip up was just really a real pain. She got so sore and stiff. They had left the day after Christmas from Mazatlan, and they got up to--Well, I should go back a little ways.

To get to San Dimas, you went up from Dimas Station. Dimas Station is just a few miles from the coast, maybe five or ten miles from the Gulf of California Coast, and near the mouth of a river called the Piaxtla River. This winds its way back up into the Sierra Madre, crossing the coastal plain first and then going through the foothills and finally up into the major mountains. It has carved a very deep canyon up in the mountains. The west coast of Mexico has a number of similar rivers and canyons. There's just a whole series of parallel or subparallel rivers that have carved tremendous canyons along the west side of the Sierra Madre. So riding down on the coastal plain is fairly easy, but the further you go up the river, the rougher the country gets.

In the so-called dry season, which generally is from February until June, you can ride up the river. The water in the river is low, and it's fordable on muleback. That's the most direct route. You cut off a lot of the distance by crossing the river and going up over the high ground between the limbs of meanders and then coming down the other side; you don't have to follow all the meanderings.

Chall: This was late in December.

Swent: Yes. But in June it begins to rain heavily, and June through September you get a very intense rainy season. The river rises very high and it's unfordable. So then there's what they call the "high trail," which is carved out of the walls, about 300 feet above the river bottom where the canyon exists. But then you have to follow the meanders because you have to follow the canyon wall, and it's a longer trip that way. When you get up near a place called La Puerta (it means "the door"), there's a side stream that comes into the Piaxtla River called the San Dimas Arroyo. At the San Dimas Arroyo my parents turned and left the main river and went up the San Dimas Arroyo to the town of San Dimas. They got there December 31.

They had just gotten settled. She must have been dog tired, and sore, and stiff, although usually the stiffness from this

muleback riding begins to wear off after the first couple of days. But she was very tired, and just glad to get there. Then someone came down to their quarters with the announcement that they were invited to a New Year's Eve dance. [laughs]

Chall: Did they go alone, I mean, just the two of them made this trip?

Swent: No, no. They had pack mules and I'm sure at least two other people. Generally you made these trips with two people to load and take care of the mules. It took two people to load the baggage onto a pack mule; that's why they always took two people. Two muleskinners you might call them. We used to call them mozos, but mozo is a very overworked word in Spanish. It has lots of meanings, and the basic meaning is just a servant. But at any rate, the travelers usually used two such people. They rounded the mules up in the morning, saw that they got fed, resaddled them, and loaded the gear and baggage on them. Usually there were just as many pack mules, or more, as there were mules being ridden.

Chall: She was bringing quite a bit with her, I would guess.

Swent: Yes. She had some trunks and suitcases and things. She had no idea what she was getting into. At any rate, she went to the dance in San Dimas that night, and they danced until six in the morning. [laughs] Then the next day they were--no, the day after. I think New Year's Day she just spent sleeping. Then on January 2 they were taken up the mountainside. The town of San Dimas is down at the water level of the San Dimas Arroyo. It was about an hour's ride muleback up the mountainside to where the mine site was and where the cabin, as you might call it, where they were to live, was located.

This was very primitive. She was really very disappointed in this, I know. It was just made of wood and had no glass windows or anything--just had sliding wooden planks that they used for windows. It was quite primitive; kerosene lamp, no electricity at that point.

Chall: No running water?

Swent: Very bare. No running water.

Chall: A couple of rooms?

Swent: I'm not sure. I assume it had more than one room, but I'm really not sure quite how big it was. It wasn't very big, but I don't know how it was compartmented. She had brought some canned food with her, but that was considered luxury. They didn't want to use it at first until they could plan menus and make it last, make each can last until they'd used it up.

II GROWING UP IN MEXICO

Langan's Birth in Oakland and the Trip Back to Candelaria

Chall: We're going to get now into the life that you remember. Tell me about how you were living as early as you can recall.

Swent: Well, we left off where my mother had arrived at this little shack up on a mountainside. That was in January of 1916, and in May, I think, of 1916, there was revolutionary activity in the country, and all the women and children were ordered out of the community. The Americans were supposed to go down to Mazatlan and then go out to the United States because it looked as if the revolutionary activity would be pretty severe.

By then mother was pregnant with me. This was fine, so she went down, rode the muleback trail down to Mazatlan. When she got to Mazatlan there were no ships available for weeks, so she was able to get permission to get a ride on a U.S. Navy coaling vessel, a collier, which was on duty there coaling naval gunboats. The U.S. Navy had a gunboat in every west coast Mexican port at that time because of the World War I activities.

Anyway, the admiral of the fleet gave permission for not only her but a number of other women who were from different communities, American women, to ride on this coaling vessel and go up to San Diego. But it turned out after they got on board that the vessel was to coal these gunboats first and then go up. They had to go up the gulf of lower California. They went to Topolobampo and then they went to Guaymas.

When they got to Guaymas the collier got the orders to wait for another gunboat that was on its way to arrive. It took a week for that to arrive, so they had time around Guaymas. The captain

vacated his quarters so the women could stay in his quarters. And I guess he wasn't very happy with that.

At any rate, after Guaymas they went down to La Paz and stopped at La Paz, which was very primitive in those days. She said there were a lot of Germans there. They had no news, and all these Germans were besieging the vessel for news of the war. After several days there in La Paz they took off for San Diego. It took them sixteen days from La Paz to San Diego. From San Diego she came on up to Oakland and then stayed with her folks, and I was born in November.

Chall: Meanwhile your father stayed down there?

Swent: He stayed back down there. After I was born [November 27, 1916] and Mother was recovered, she took me back down to Mexico again by ship.

Chall: How old were you?

Swent: Just a few months. I think about six months maybe, but I'm not sure. I can look that up.

Chall: Well, you were still a baby, quite a young baby.

Swent: Yes. My dad met her in Mazatlan, and they rode inland by muleback again.

Chall: What a trip, with an infant!

Swent: Well, yes. After I grew up I learned the way they carried them. They put a sheet around the shoulder of one of these mozos and made a sort of a sling out of it. Then they would put the baby in the sling. The mozo would sit in the saddle with this sling riding over his stomach and maybe resting on the horn of the saddle. They did all this; my dad didn't do it, although he would take turns sometimes when I got cranky or something.

Chall: Well, that seems like a typical way to carry them.

Swent: Well, typically babies are carried on their backs--in shawls on their backs. This was in the front. At any rate, they took me and went back to their shack in Candelaria. The little place where the shack was was called Candelaria.

Then, I'm not sure when, but sometime around 1917, late '17 or maybe early '18, a very famous geologist named Augustus Locke was engaged--I guess by the Mexican Candelaria Company, or maybe the Mexican Candelaria and San Luis Mining Company jointly--to come and study the geology of the region and then prepare geological maps.

Dad was chosen to be an assistant to him to help him do this work. Mr. Locke produced quite a voluminous set of maps which I saw in later years. They're marvelous maps; a very well-done job.

Chall: Geologist?

Swent: Geologist, yes. He's well known, even up here. I think your office wants to interview his widow now.

At any rate, as a result of that, my dad got quite a few ideas about what we would call rock controls. These were very early, very developmental ideas about rock controls--how the deposition of ore might be controlled by the different types of rocks in which the veins occurred. With knowledge of the rock controls you could maybe predict where to look for ore and have a favorable chance of finding it.

Chall: That was not well developed in that day?

The Move to Tayoltita: The San Luis Mines

Swent: Not in great detail. At any rate, he left the Mexican Candelaria Company and went to work for San Luis Mining Company--

Chall: That's your father?

Swent: My father. --which was another mining company which was based over the mountain. The mountain between San Dimas and the Piaxtla River at that point is called Bolanos. It was about a three-hour muleback ride from San Dimas. You had to go up--it was a big climb and then a big descent. You just went up one side of the mountain and down the other. You went down into the Socavon Arroyo and then down that to a little town called Tayoltita, which was right on the Piaxtla River. The mines again were up on the mountainside but on the opposite side of the mountain, and it was a different set of veins from the Candelaria veins.

He moved over to the San Luis Mining Company in 1918. The manager at that time was a man named Townsend. Dad went over to work under him, and in a very short period (I'm not sure, maybe six months or less than a year, I think) Townsend left and my father became the manager of the mining operation. They had a milling operation also. The operation at that time was very small and was having a hard time really keeping going. But fortunately the ideas that my father developed through his experience with Mr. Locke and the experience of doing the mapping in the Candelaria mines, and

developing his rock control ideas, enabled him to find and develop some fairly substantial ore bodies in the San Luis veins.

Chall: What was the ore?

Swent: Gold and silver. Mostly what we would call high-grade ore. I'm not sure what the Candelaria ratio was, but in the San Luis mines the ratio of silver ounces to gold ounces in the ore was about fifty to one. In other words there would be fifty ounces of silver to one ounce of gold. They occurred together. In fact, a lot of it occurred as an amalgam called electrum. This is an amalgam of gold and silver, and it has varying proportions with no fixed ratio between gold and silver.

Chall: That's considered a good ratio?

Swent: Well, generally you name a mine after the metal that produces the most money. The reason we call these gold and silver mines was because the ratio of fifty to one was also very close to the ratio of the prices. Sometimes, depending on the variations in price, it would be a gold mine and sometimes it would be a silver mine. [chuckles]

But, of course, in color the bullion that they produce from these was silver colored because in actual ounces, why, you had fifty ounces of silver to one ounce of gold, and when you combine them in those conditions it all looks like silver.

Chall: So they aren't separated out, then?

Swent: The two metals are not separated at that point. They are separated later, but it takes much more sophisticated and larger facilities to be able to do this, and these little mines couldn't afford them. So they would send the bullion bars out to a refinery. In the early days, they sent the bars from San Dimas, I think, and from Tayoltita up to the Selby smelter that was here in San Francisco Bay. That was where it was refined, and the gold and silver separated.

Chall: I think you've told me what the bullion weighed.

Mule Trains

Swent: I think they were about 75 to 80-pound bars. I think they tried to get them around 32 kilograms. Everything was in kilos down there. I think they were something between 32 and 35 kilograms per bar.

That's fairly heavy; for a man to lift one it takes quite a little effort. But on the other hand, he can manhandle it. And you can load two of them on a mule, one on each side of the pack, and that makes a full load for a mule. If they had been much larger, then an ordinary mule probably couldn't handle it. The maximum weight for a pack mule is 150-160 pounds.

Chall: Generally, how often would you send this down? Would you send several mules at a time?

Swent: Everything came in by mule back. Freighting by mule back was a big business. There were several Mexican ranchers and entrepreneurs who put together large numbers of mules. They'd have two or three hundred mules, virtually all pack mules. They would bring in the supplies that way in these big pack trains, running anywhere from a hundred to two hundred mules at a time. The trails in those days--if you were traveling one way and you met one of these pack trains coming the other, it was a disaster. You just had to get off the trail and let them pass.

Chall: Where would you get off? [Chuckles] Was there a little room?

Swent: Well, if you met them on the high trail, it was a real disaster. You might have to turn around and go back because the high trail was not very wide.

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Swent: Sometimes there would be a place you could move over to the side and let them pass you. But if you saw them coming, it was like passing a car in a one-way street or something. You looked for a place to go early in the game.

Chall: Didn't you have any idea when the train was coming up or going down so that you wouldn't be likely to meet them along the way?

Swent: Oh, they were running all the time. They were just on the go all the time. At any rate, these mule trains would come in with all sorts of cargo. They'd bring in corn, beans, explosives, machine parts, machinery sometimes. The machinery was all broken down in pieces, but they brought them in. When they got into Tayoltita and unloaded, they'd spend the night there and then rest. When the company had accumulated enough bullion, then they would load the bars on one of these pack mule trains. Certain pack mule train owners were more trusted--they didn't trust everybody with the bullion.

Now in those days, in the early days, when my parents first moved over there, I think they were producing something on the

order of thirty bars a month which would take maybe fifteen mules once a month. In later days when I was working there--this was in the 1940s and early 1950s--we were producing 180 bars a month.

Chall: That's quite a change.

Swent: Yes. At any rate, the shipment of bullion--that was always a special occasion. In the earlier days, the bullion was stored in the office across from--you might call it a street--from the house that we lived in. It was stored there, and then they would stack it up. It would depend on whether it was the rainy season or the dry season because in the rainy season, the mules would not always go across to the mill. Where the ore was milled and processed and where the bullion was produced was across the river from the town. In the rainy season you couldn't ford the river, so the only way to get there was over a narrow bridge which the mules couldn't go on. It was a suspension bridge. It had just two cables, fairly flat, with wooden ties put crosswise between them for the deck; two vertically curved cables served as the suspension cables. There were supporting wires from the upper cables to the lower cables. But the bridge swayed something terribly. The planks that went across from one cable to the other were really ties; then on top of those they put planks going the other way, going the long way of the bridge.

When I was very small, they had two 12-inch-wide planks for a walkway 24 inches wide. The cables were about, oh, between four-and-a-half to five feet apart, so you had plenty of room to fall off either side. [chuckles] Once when I was leading my brother across he did fall off, but fortunately I had a good grip on his hand, and was able to keep him from falling thirty or so feet until someone helped me pull him back onto the walkway. In later years they widened that to three planks wide, so it was 36 inches wide, and that made easier walking. But the mules never would go across that, but some burros would.

So in the rainy season these trains, if they came up the high trail, could not go across the river, couldn't pick up the bullion over there, so the bullion was stored in this office building in the safe there. Then we loaded it up there. They would have all these mules milling around down below our house for a while while they loaded all the bars out.

Chall: Is that the house with the little office next to it that you showed me a picture of?

Swent: Yes. The office was a one-story building, long, just one story high, with a basement. Then parallel to it was the house where we lived; now, that was two stories high with no basement. We lived in the upstairs, and the lower story had a dining room in it, a large dining room, where not only my folks but the other people of the staff would eat. Across from the end of the building there was an open space that was cobbled, maybe forty feet wide. And then there was another building that was a kitchen. They usually had a Chinese cook there, and he would cook the meals. Then they had a Mexican girl who would act as a waitress and bring the food over on trays and feed the men, at dinnertime.

For breakfast--there were generally people around there all day--they came in as they wished, ordered what they wanted, had their cereal and eggs and stuff.

Chall: This is the way you lived? Upstairs, did your mother do her own cooking?

Swent: Not at first. At first they ate downstairs with the rest of the staff. The rest of the building had some offices in it at the time. In later years the office building which was across the 10-foot wide street was enlarged and then the offices next to the dining room were abandoned. Then it was turned into what they called a club, where they would have dances, large dinners, and that sort of thing. There was a pool table there, and it was sort of an entertainment center.

Chall: In all the years you were growing up you lived in the second story of that house?

Swent: Yes. It was fairly big. The house was big; there wasn't any lack of space in it for us. In later years a lot of remodeling was done, and when electricity became more plentiful they got an electric stove that my mother could cook on. And then we took to having our own meals and eating upstairs.

Chall: What do you mean by later years?

Swent: Oh, maybe in the mid-1920s, somewhere around 1925. I'm just guessing at that, but it was several years before I left there. I'd say around 1925.

Chall: So, most of your growing up--when you were still living there, before going off to school, your memory is eating downstairs with the rest of the people on the staff?

Swent: No, no. Most of my memories as far as eating is concerned are eating upstairs, because eating downstairs with the staff--I was still too young to remember much of that. I was only two years old when they came over from San Dimas. I have some vague recollections of eating there a few times. Maybe the remodeling was done earlier than I thought. It might have been done in the early 1920s rather than in 1925.

Chall: So you think maybe you can remember your mother cooking meals, or do you remember the servants bringing meals from the kitchen upstairs?

Swent: No. There wasn't any of that. They brought it over to the dining room and that was it. My mother--when that house was remodeled particularly, she had her own separate servants. In fact, she tried to teach some of them how to cook.

Chall: They did the cooking?

Swent: Well, not at first. She had to do a lot of missionary work there, to teach them, because these people were not--they knew how to cook Mexican food, but they didn't know how to cook on an electric stove. They knew how to cook over a piece of iron plate over an open fire--how to brew coffee by dumping the stuff into a pot and boiling it, and how to make beans and tortillas.

The company also developed a vegetable garden there. The garden furnished vegetables to both the staff kitchen and family staffs. Then there was another building that was a staff house where there just were rooms and a bathroom, a sort of a rooming house where the bachelors lived. There were three other small houses where there were other couples living. But when I was first there as a baby, Mrs. Townsend, I guess, maybe was there. I don't remember her, but I know there was a Mrs. Townsend. And I think she was the only other American woman there.

Chall: Your mother was really isolated. Were there other foreign women, not American?

Swent: Well, as time went on, yes. But not at first.

Chall: Who were the people whom you call staff? Were they American mining engineers and geologists and mine/mill people? Hard laborers?

Swent: No, no laborers. In the early days the company had a Mexican accountant. Then, as the accounting got more elaborate and the business grew bigger, and more records had to be kept, a paperwork kind of whirl developed, then they started bringing in foreign accountants. For many years they always had one accountant as

office manager. He was an American or at least foreign. I think most of us were Americans actually.

Chall: Was Townsend an American?

Swent: Yes. And then they had generally somebody who ran the mill, and he would be a staff member and a foreigner. He had to have some basic knowledge of the metallurgical process and the machinery. He had to have some technical education. Then they generally had a master mechanic. That was the title we gave him, and he would be a man who could repair and install machinery. And that took a good deal of education and practical experience, too.

We had an assayer who was in charge of analyzing all the samples that were taken in the operation every day: samples of ore, samples taken around the different parts of the mine to control the mining operation, and then samples from the milling operation and samples from the bullion. And all these had to be analyzed; there were several hundred analyses to be done every day. So, for many years they had a foreigner--you might call him an analytical chemist or assayer.

Then they would generally have one or two mining engineers. In the early days they didn't have a geologist, but in later years they also added a geologist to the staff. The business kind of grew; at first it was pretty small.

The house that we lived in and also all these buildings that I mentioned: the office building, the house that we lived in, the kitchen across the patio there, and the staff house were all made of adobe, then were plastered and whitewashed. They were all white from the exterior, and the interior, too--it was all white.

Chall: And the floors?

Swent: The floors were generally concrete except in the office building, and there they were wood. There was a basement in the office building. It was closer to the hillside, and the ground sloped away there. The main house and the kitchen were on flat ground, so there were no basements excavated for them. But the office had a partial lower floor, so it had a wooden floor on the street level and a concrete floor on the lower floor. But the main working area was on the upper floor. Downstairs was used for storage, and in later years they put a small printing press down there. And it was also where the engineers made blueprints. The upstairs where we lived had wooden floors. Downstairs the dining room and one adjacent room had concrete floors. The large room given over to employee recreation had a nice wooden floor for dancing.

Description of Father's Duties as Manager

Chall: How close to the mill was the office? Was your father going back and forth all the time, or did he spend most of his time in his office?

Swent: Well, it depended on the era. In the early years he did a great deal of riding muleback up and down to the mine. That was an hour and a half muleback ride each way. The mill was across the river from the staff house, and was maybe a fifteen minute walk. In the early days the big job was developing ore and the mine and increasing the production. So he spent a great deal of his time up there, but I was too young to really appreciate exactly how much he spent there.

Later, when the company expanded the mill, a lot of his time was just going over to the mill and organizing the construction work. He didn't actually supervise it, but it was under his general control. Then he spent more and more time in the office, and in later years it was virtually a full-time office job.

Chall: As a manager of the mining enterprise, what's the job? What does that entail? Does it entail supervising?

Swent: If you were to define the job by a textbook, you probably would say he was in charge of the mining operations, of the milling operations, and of the accounting, and responsible to, generally, some official in the company, the parent company.

Chall: Who might be somewhere else.

Swent: Yes, who was somewhere else. But if you want to be realistic about it, in those isolated areas, the manager was everything; he did everything. The range of things that you got involved in was just tremendous. You'd direct the recreational things. You get into the medical areas, providing medical care, taking care of all the human problems that arose, and public relations, relations with the community, and with employees.

And in those days, because of the distances and everything, they had to give managers tremendous leeway and authority, which nowadays doesn't exist. The trend in modern mining has been to limit the managers more and more in their authority and fields in which they operate. Lots of the big American corporations will supply the auxiliary services, such as personnel services or public relation services and this sort of thing. They are not necessarily the manager's responsibility anymore. But in those days the job included everything.

In Tayoltita, for instance, people couldn't raise enough beans and corn in the district to feed everybody. They had to be brought in. And the people in town were too poor to stockpile food and that sort of thing. So, it was up to the company and, in the long run, up to the manager, to see that supplies of food were brought in during the dry season and stockpiled and warehoused so that people didn't starve to death in the wintertime. They wouldn't starve to death; they'd just leave you, and you wouldn't have any work force. So he had to be sure that they would be provided for.

Chall: And that was, I suppose, for a company store?

Swent: Well, this led in to having a company store. As the requirements got bigger and bigger and the enterprise got bigger, why, they established a company store. And this also brought in better merchandise than the small little stores in town could stock. So you had a lot of social responsibility as well as just the technical responsibility of running the mine and mill.

Chall: So, he had to be concerned with not only the staff, who were mostly Americans, but with the Mexican community.

Swent: Yes.

Learning to Speak Spanish

Chall: I assume he learned to speak Spanish.

Swent: Yes. Everybody that went down there did in those days. In later years some of the women wouldn't bother with it. But Mother learned Spanish, and Dad learned it. And of course it was my native language, and I probably wound up speaking it better than either of them, although Dad was very experienced in legal and business documents and all that sort of thing. He was really very good at that. Mother never really did much reading in Spanish, but she learned to talk it. She could talk with the people and got along very well with them. But both of them always had some accents; they never learned it without an accent.

Chall: How did you learn to speak both Spanish and English? English, I assume, was spoken at home.

Swent: Yes.

Chall: Where did you learn your Spanish?

Swent: Well, Mother almost always had Mexican maids of one sort or another. She had a Mexican girl when she was over in Candelaria. And when they came over to Tayoltita she had Mexican servants. I spent as much time with them, if not more, than with my mother. Also Tayoltita was a larger community; we were no longer up the mountainside; we were down where there was population.

So, as I got up to the age where I could get out and play and run around, why, there were Mexican children that I would play with. Actually I spoke Spanish first, more than English. I used to speak English with a Spanish or Mexican accent. My grandfather Ru just used to be furious over that when they would bring me out on vacation. He thought that was terrible for an American boy to be speaking with a foreign accent. But eventually I got over that.

I had one brother. He was four years younger, and he was born after we moved to Tayoltita, in 1920. That was all; my mother was not able to have any more children. I think she would have liked to, but the doctors told her that she couldn't have anymore because of some medical problems. I was never really quite sure what those were. Mother and Dad kept all their ailments pretty much to themselves; they didn't really let me know what was going on in that respect. And I didn't know enough to ask questions. But I gathered that she was not able to have more children.

Medical Care

Chall: What kind of medical attention did you have?

Swent: I don't know what they had over in San Dimas and Candelaria; I have no idea. I assume they had some sort of doctor around. But in Tayoltita the company did retain a doctor, usually a staff person or foreigner. The first one I remember was German, a Dr. Kirschner. He was of German extraction. He must have had a wife, but I don't remember her. But he had a son who was just about my age, and we used to play a lot together. His name was Ernesto. Some thirty years later our paths crossed when he was working for Eimco, a mining and milling equipment manufacturing firm in Denver.

Chall: Did you have a little hospital? I would imagine that the miners would be injured and so would the mill workers from time to time. Was this the only care they got?

Swent: Yes, this was the only doctor in the area, and that was what he was there for, to provide care to all the workers, not just the staff. The so-called hospital building was maybe a half a mile away from

us. It was a two-story building with a big adobe fence around it with a garden. It was a large garden; probably the largest garden of any house in the area.

Chall: Which they tended? It was their garden?

Swent: Well, they could take care of it if they wanted to. That was up to them. The front yard had rose bushes in it and was usually well kept. And they always had servants, too. All the foreigners would have servants, at ridiculously cheap wages and that sort of thing. But again, you had to teach them everything, because they knew very little. Most of them couldn't read or write.

But at any rate, the hospital was two-story adobe. The so-called hospital facilities were on the first floor where the doctor had his little pharmacy and waiting room, a place to see patients, a little operating room, and a large open room with cots that served as a ward. It was very primitive. It wouldn't get any license at all today. He only performed emergency surgery; anything that could be sent out to Mazatlan or Guadalajara or Mexico City was always sent out.

Chall: Does that mean somebody would have to go four days down the trail?

Swent: Yes. Well, you know, depending on the nature of the illness or ailment, if they had to be carried in a stretcher, they would be carried in a stretcher. A lot of people went out on stretchers.

Then they had a wing where they had a bunch of cots. That was the ward. And they didn't supply any meals. If you had to be hospitalized on one of those cots, why, your family was expected to bring your meals to you. The same thing was true of the jail in town. If you were in jail, why, your family had to bring you the food! [chuckles] If the staff and their families had to be kept in bed, they were kept at home and the doctor would make house calls.

The doctor lived upstairs in the hospital building. It had a porch; one side of the building was just screened in and overlooked the front entrance. In the early days there we all had sleeping porches, big screened areas, because it was quite hot in the summertime. This was just a few miles, about forty-three miles north of the Tropic of Cancer. We were very close to the tropical zone. The Tropic of Cancer ran south of us, but north of Mazatlan.

Chall: And how high were you in the mountains?

Swent: Well, Tayoltita, the town itself, was about 1,500 feet above sea level, approximately. The lower mine entrance in those days was,

oh, maybe 3,500 feet. The mine office was at 4,500 feet. The peak of the mountain, Bolanos Mountain, was about 6,000. But that was not quite as high as the rest of the mountains behind it and around it. A lot of the mountains around there went up to 8,000 feet. And the ridge, for instance, between us and the next canyon to the south, was 8,000 to 12,000 feet. The next canyon to the south of us was formed by the Presidio River. It was a subparallel river to the Piaxtla, and it came out to the ocean on the coast south of Mazatlan. And all there was between the Piaxtla canyon and the Presidio canyon was just a ridge. You rode a day and a half muleback up the mountainside and you got to a divide and you went down into the Presidio canyon. There were mines over there in the Presidio canyon, too.

Chall: You actually weren't all that high there.

Swent: No. And it was hot down in Tayoltita. There were some people who lived at the mine offices, and that was cool, a much better climate. But you were way up on the mountainside, and there wasn't as much social life there and there weren't as good rooming facilities.

Community and Social Life

Chall: What was the social life like?

Swent: Well, among the Americans it was pretty simple. The daily life just consisted of--

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Swent: --having breakfast in the dining room and then going to work. Those that worked at the mill would come back for lunch. If they worked further away, if they went to the mine or something, why, there wasn't time enough to come back for lunch, so they would take sandwiches and drinking water. They would come back for dinner in the evening. There were no radios in those days, not even phonographs, and they just did a lot of reading.

Once in a while they would have a little party or get-together. Mother used to try to entertain them, having maybe something special for dinner or something like this, while they were eating in the staff dining room. Later, when we got our own kitchen, then she took to inviting them up one or two at a time for dinner. We usually had somebody for dinner, almost every other night or so.

Chall: These men were single?

Swent: Most of them were single in the early days.

Chall: Did they mingle with the Mexicans or the Mexican women much?

Swent: Oh, some. But not a great deal. There were always dances. I should go back a little ways. This area where we lived was maybe three-quarters of a mile out from the edge of town. The town of Tayoltita was about four thousand people; virtually all Mexicans. I don't think there were any--well, a couple of Chinese maybe, and maybe a Japanese. But no foreign Caucasians. There were some good families there. But the town had its own social structure.

It was a company town entirely; it depended entirely on the mining company. So the social life in the town just followed the organizational structure of the mine, of the operation. The top social people were generally those who had the highest jobs in the company.

Chall: What would they be doing? What type of jobs in the company?

Swent: Well, in the early days we had a Mexican accountant, and he was a real jewel. His name was Pedro Lares. In fact, he and his wife Lupe were very good friends of my folks, and I'm still in touch with two of their daughters. One of them lives in Durango and the other one lives in Chihuahua. They had more daughters than that, but I'm only in touch with two of them. And they had one son who was my age, and we used to play together a great deal until he went off to school. We were very close, actually, within six months of each other and we were really very close as friends. But unfortunately he was killed in an automobile accident a number of years later. Then another son worked in the office for years and was a good acquaintance, although I was never as close to him. He was older. And then the rest of the family were daughters. They had about six daughters, I think. And the social life of the town was marrying off these daughters. [chuckles] There was just one wedding in the family after another; every year or so there was a wedding.

Chall: Was there a Catholic church in that town that they all belonged to?

Swent: Yes. There was a Catholic church building there. But, you know, Mexico had banned the clerical people and the wearing of clerical garb in public. The Catholic church always had somebody who was technically in charge of this church, but in the early days of my life they were seldom there. In fact, maybe never there for years. You could go to the church; the church was there, and people went to it, but they were on their own, so to speak.

Chall: Somebody there saying Mass, someone clerical?

Swent: No. But they could get somebody to come in if there was a wedding or something like this. And, of course, generally the way the weddings went was that you would have the civil wedding first, and this was low-key. Then they would have, maybe the next day sometimes, or sometimes the same day, they would have the church wedding. And that's when the big party was, after the church wedding.

The wedding party would generally set out from the girl's home and walk. The church was up fairly high on the hillside, above most of the residences. Most of the better residences were down below on the hillside. They would walk up to the church. It was quite a little walk; maybe a mile or so over the streets. In some places they were cobbled, and in some places they were just dirt streets. And you had to cross two or three gullies before you got to the church.

Then they would generally assemble after they had walked up from their home. There was a little patio in front of the church with a low adobe wall around it. They would assemble in there, and when they got the whole party together then they would go into the church and have the ceremony. Then afterwards they would generally have a big dance or baile. That would last for hours. They had a band; there was a local band that wasn't too great on musical quality, but they made a lot of noise and could get a pretty good rhythm anyway. And they generally had a lot of drinks. On the alcoholic beverages--at a high-level wedding they would have, you know, beers and hard liquors. But the common people would just drink a very crude distillate that sold very cheaply; about 50 centavos or maybe 25 cents U.S. currency for a bottle that would lay you out cold if you consumed that much. So there was a lot of drinking, particularly among the less well-to-do, the ones who could least afford it.

Chall: The Mexicans who worked in the mines and lived in the area--did they invite the management and staff to their weddings and parties? Or was that again, sort of stratified?

Swent: Well, it was stratified. The higher social levels, yes. There was a lot of interchange there. We always were invited to the Lares's weddings and to many of the other ones. And the company always had a New Year's dance, and sometimes other dances. They would have two or three dances a year and invite most of the Mexican and the staff people, supervisors and that sort of thing. They didn't invite the laborers, but there was a lot of supervision required with this type of illiterate work force. So we had a pretty big Mexican staff that always was invited to several parties a year

that the company paid for. But the big one was the New Year's Eve, and that traditionally was an all-night thing. The Mexicans really think that's great to have an all-night party.

Chall: That was an all-night party in town?

Swent: Generally there would be other parties, too, yes, in addition to the company one.

Chall: All right. Let's see. The medical care was fairly primitive. Mostly the people who were around were Mexican, and Catholic probably. What about the religious observances of the foreigners? How much of that was a problem or important?

Swent: No, I don't remember it either being a problem or considered important. Most of them just were Protestants. Most of the staff were Protestants, were not Catholics. As I say, there weren't any Catholic services anyway. You could go to the church if you wanted to, but you just sat there. I don't remember any observances, any religious observances of Protestant type at all. Very greatly outnumbered--there was no Protestant church in the town, no structure. And there was never any Protestant minister there in all the time I've been associated with it. I doubt if there's one there now. Actually, the Mexicans, at least in that area, were not very strong on-- They were superstitious, I would say, more than religious.

The San Dimas Mining Area History

Chall: Were the Mexicans primarily in that town and in the mining area for employment? Were you in a town where people actually had lived for some generations?

Swent: Well, actually the town arose as a result of the mining activity. But this was true of the entire district. It was called the San Dimas mining district originally, and it was organized under the Spanish regime as a separate mining district.

Chall: Spanish or Mexican? Or both?

The Spanish Interests, 1700s to 1800s

Swent: Spanish. The mining in the area goes back into the 1700s. These mines were discovered considerably later than the major silver mines down around Taxco, in San Luis Potosi and others, because the area was so inaccessible. But in the late 1700s--and I'm not sure of the exact year--Maybe I'd better go into a little geography first.

This district is in the middle of what was called the Barranca country of the Sierra Madres, where it's just been eroded away into these deep canyons from the central plateau. There's a central plateau that's about 5,000 feet high, it slopes off towards the Gulf of Mexico coast. And as you go to the west, the plateau--when you get to the Sierra Madres there's a little uplift there and the mountains get a little higher than the plateau, although the edge of the plateau may be 8,000 feet. And the mountains rise up as high as 12,000. Then all of a sudden you just have this welter of canyon after canyon after canyon, and very highly-eroded big country. This is called the Barranca country.

The first mine in the Tayoltita area was discovered in 1757 by an indian named Santiago Cayetano Flores. His mine was called the Agua Caliente ("Hot water") mine, and was a high grade silver mine. In the same year a small village called Guarisamey was founded nearby (then called Victoria).

The city of Durango, which is the capital of the state of Durango that Tayoltita's in, is on the plateau. It's flat. And there's a big marketplace there, of course. All these old Spanish towns have their markets. The Spanish found Indians selling silver there and silver ores, specimens and that sort of thing, so they tried to find out where the Indians were getting this, and the Indians wouldn't say. So, some Spanish followed them when they went back home, they followed them and traced them to what is now known as the San Dimas area.

The first vein that the Spanish found in this venture was called the Tecolota vein. The town of Guarisamey grew rapidly and in a few years had a population of ten thousand persons. The Spanish built a big church there. The only things left in our day of the church--it was an adobe church, but it was abandoned many years ago--are some walls and a couple of large bells. The bells were down on the ground at one time, but have been rehung. On the facade of the church when I was still young--you could read the date 1792 carved in plaster.

Chall: They wouldn't have been mining the earth deep down, would they?

Swent: Oh, the Indians had not really done much, no. They hadn't mined underground, really, they just had scratched the surface. The Spanish did go underground, and they had some fairly extensive underground workings, virtually all done with slave labor. In the San Luis mines we found leg chains underground and we also found some old wooden gears and things of that sort that they used.

There were arrastras in the district. An arrastra was the early metallurgical treatment. It was just a process of amalgamation. It took fairly high-grade ore to do this, but they would take high-grade ore and put it in a little masonry enclosure that looked like maybe the top of a well. And it had a masonry bottom, masonry floor, and in the center would have a vertical pole and a spoke which went out over the enclosure.

The enclosure might be three or four feet high, and this spoke was generally tied to a horse or a mule; or it might even be run by people, but mostly horses and mules. And they went around and around with this, and tied to this spoke inside the enclosure was a large rock which was dragged around on this masonry floor in a circle. Then they would dump ore into this enclosure and drag this stone around it. Then they would add mercury to it as the ore got ground up, and the metals were liberated, and the mercury would form an amalgam with the gold and silver. The amalgam would always pool down at the bottom, and they would throw the ground-up rock away and keep the amalgam, press the excess mercury out of it and ship out the pressed amalgam.

Arrastras are very common; they're all over the West here, because amalgamation was the main way of recovering native gold and silver ores until about the late 1890s, early 1900s.

Then the mining activity shifted away from the Tecolota and Promontorio mines in the Guarisamey area. These mines were up the Piaxtla River, about an hour's muleback ride from Tayoltita. Then the activity began to shift up the slopes of Bolanos Mountain. Mineralization was found in a number of veins near the top of the mountain about three hours muleback ride from Guarisamey, but on the Tayoltita side of Bolanos. Then they followed it down on the San Dimas Arroyo side discovering the very rich Candelaria mine.

There was a very active, intelligent Spanish entrepreneur, I guess you might say, in the city of Durango named Don Juan Jose Zambrano, who amassed a tremendous fortune from these mines. He lived in Durango in the late 1700s and early 1800s, and had vast landholdings in addition to the mines. Under the Spanish the mines were, in essence, privately owned and operated, but you had to pay the king of Spain what they called the King's Fifth, as a royalty; we would consider it a royalty nowadays. The king got twenty

percent of the product; it was physically set aside for the king. Zambrano very quickly acquired control of the newly discovered veins in the Guarisamey area. He personally discovered the Candelaria vein one day when going from the Guarisamey area to the La Puerta camp (located where San Dimas was later founded). He noticed a sunken spot off the trail. He examined it in detail and discovered a rich outcrop of the vein. But, even after paying $11 million in royalties, Zambrano amassed a fortune, estimated in the old days at $30 million dollars or so. It's documented that he wanted to put silver balconies on his very luxurious house, but the government wouldn't permit this because they didn't want anyone living more ostentatiously than the viceroy! The city of Durango (called Victoria in those days) was a village of less than eight thousand persons until Zambrano developed the Guarisamey mines. He built the principal streets, the Plaza Mayor, the theatre, and most of the public buildings of Durango. All of this was paid from his earnings in the San Dimas mining district.

The town of San Dimas was founded in 1786 where there had been a little ranch and a mining camp named "La Puerta."[1] Legend has it that the area was inhabited by a group of ore thieves, and that this led to the selection of the name San Dimas, because he was the penitent thief who was crucified on the right side of Christ and is the patron saint of supposedly penitent thieves.

In 1795 the Spanish mine inspector Jose Navarro y Olea built a trail from Agua Caliente to Durango so that salt and food could be brought in. Persons using it were charged two reales (1/4 of a peso) per load transported, which everyone gladly paid because the trail saved two days travel to Durango.

The Tayoltita area did not at first provide as much silver as it could have because of a shortage of mercury. The inspector of mines sent the miners to the commanding general in Durango, who obtained it for them and Tayoltita silver production increased. (The distribution of mercury throughout the viceroyalty was a source of "pay off" to the viceroys since they controlled it all.)

The Americans Enter the Area in the 1860s

Swent: The Zambrano era ended when he died shortly before the Mexican War of Independence broke out in 1810. For a while mining activity

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[1] This history of San Dimas was added by Mr. Swent while he was reviewing the draft transcript.

sort of died out. All the little communities were sort of in the doldrums. The lack of any social or business stability and the general physical damage caused by the war brought on a depression in mining in general and especially in Guarisamey. Over the following years people gradually left the town until it became a "ghost town." But then after the U.S. Civil War American companies became interested in it. A lot of the people who had been in the armed forces of either the Confederacy or the Union had nothing to do, so they went adventuring down in Mexico. Some of these people had worked in areas like the Comstock Lode. Then when the Comstock Lode began to decline in the late 1860s, why, they went to Mexico and started developing or re-opening mines down there. This led to a revival in the San Dimas district, but the center of mining was now the rich Candelaria mine, and the population growth was in San Dimas. Guarisamey has never recovered.

Colonel Daniel Burns and Lloyd Rawlings

Swent: The first of these adventurers that I know of was Captain Charles B. Dahlgren, a machinist and mining engineer who worked in a number of Mexican mining camps and eventually wrote a booked entitled Historic Mines of Mexico which he published in 1883. In it he states that the Durango Mining Company engaged him in 1870 to finish driving a long tunnel to drain the Candelaria mine. His survey showed that the tunnel had been driven in the wrong direction. He corrected this and drove it until on May 5, 1880 the old works were broken into 943 feet deep. This brought on a huge celebration in San Dimas, with rockets being fired, the church bells rung, bands playing, a parade to the church, and a grand dance in the plaza that night, and much drinking and dancing.

In 1873 he laid out a tunnel 384 feet long to cut the Bolanos vein 601 feet deep. This was successfully driven and production from the vein started the same year.

The second one of these adventurers that I know of was a fellow named Colonel Daniel Burns, who settled in the San Dimas district and eventually organized the Mexican Candelaria Company, which is the company my dad went to work for. He was, I guess, quite a character. In a picture I have of him he wore a goatee and one of these big western hats and a fringed leather jacket. He was quite active; he acquired mines, organized the company, got it going. I'm not sure when he came to the area, but it was before 1890.

In the 1870s, the Hearst, Haggin, and Tevis group was formed in San Francisco. James B. Haggin, Lloyd Tevis, and George Hearst formed an informal mining investment group. George Hearst was the mining engineer, and Haggin and Tevis were basically finance people. If Hearst found a property that he thought they should buy and develop, why then they would dig the money up and the three of them would develop it. George Hearst would get a percentage for having found and evaluated the property. Also he was frequently the man who had to get the mining enterprise going. And they had many such enterprises.

But anyway, about 1877 they sent a mine captain from the Comstock Lode--his name was Lloyd Rawlings--down to Mexico to develop and operate a little silver and gold property that was, oh, maybe a couple of days muleback ride north of the Piaxtla River at a site called Joquistita. He developed that property and it operated for several years. But it wasn't really very, very good. In the late 1880s, it declined and was shut down. So, he was casting around for another property to develop and he came over into the San Dimas area. He had heard of, I guess, Burns's activities there. So, he came over initially about 1890, maybe late 1889.

I have a book of letters that Lloyd Rawlings wrote the first two years he was there. Unfortunately, they're one-way letters. I don't have the answers. But they are a record. It's very interesting, but you have to sort of read between the lines, particularly on the letters that he wrote back to George Hearst and to Haggin. He began dealing with George Hearst and then Hearst died in 1891, so then he dealt with Haggin and sometimes Tevis. But it's very interesting. He would tell all his problems, and you didn't know what the answers were that he got. But he had, apparently, a lot of latitude.

He went into the district and looked around and decided that he would buy a little property called San Antonio, which was on a side stream into the San Dimas Arroyo. He did some development work on it, developed a little ore about 1890. So then he built a little 50-ton-a-day mill to treat the ore, grind it, and try to produce a little bullion.

By this time Burns was a little bit nervous about having another competitor in the district, so he decided he would buy Lloyd Rawlings out, or buy this property out from him. So he bought the San Antonio property and the mill, paid for it with a check which Rawlings immediately sent down to Mazatlan to be deposited. And within a day or so after the transaction, why, there was a tremendous flood; rain, and it was not just local--

The Big Flood of 1893 and its Effects

[Interview 2: September 25, 1987]##

Chall: When we left off last time we were discussing the flood and what happened to the money that--was it Rawlings had paid Burns?

Swent: No, Burns had paid to Rawlings. These weren't personal transactions; they were inter-company transactions.

Chall: And the flood?

Swent: Yes, well, this flood that I was talking about was in September of 1893, and was very, very major. I don't think there's been a flood that major since then. However, one of the things that you need to understand, to understand its effects, is how gold and silver metallurgical plants were built in those days. There was no electricity at that time in this entire district, so the mills--and there were at least a half-a-dozen of them in the San Dimas district--were built always near a stream to take advantage of the water power.

What they did was they generally would dam off the stream and divert the water into a ditch and maybe a pipeline to let it run down, and to carry the pipeline a ways downstream to gain elevation. These streams had very fast currents, generally, and the gradient was high, so that in a very short distance you could get a fair amount of head with the water in a pipeline or a ditch. Then they would drop the water through a water wheel. These were the precursors of electric-generating water wheels.

The water wheel had a long shaft attached to it, and pulleys and belts, or sometimes just ropes, and would drive other shafts with pulleys on them. These sometimes were geared to vary their speed, although primarily they varied the speed with the size of the pulley and belts, or ropes. And then these drove the various pieces of equipment--generally crushers, stamps and a ball mill, maybe. And all the equipment was powered just directly from the water by these various pulleys and shaft arrangements.

Most of these mills were built in the late 1800s, but I did see one that survived into the time when I was working there in the late forties and fifties of this century. I saw one complete in a place called San Vicente, which was higher above, in the same district.

At any rate, by building them down close to the water level of the stream, they were quite vulnerable to these floods. And this

particular flood in 1893 just wiped out and damaged all the mills in the district. In one of his letters, Rawlings estimated just a few days after the flood that the damage to the district was maybe $200,000, and that the damage to the little plant that the San Luis Mining Company then had in Tayoltita was about $500. But I think that was a gross underestimate--at least the $500 part of it--because in a later letter, many months later, he's still reporting on the repairs to the mill and saying he's only doing what's essential to maintain things that were out-of-doors; he wasn't doing anything yet with the equipment that was indoors that had been damaged.

So they were shut down for many months, and I think the $200,000 probably is even less--he said he was writing a letter to the Examiner in San Francisco because there were many properties in the area that many Bay Area residents would be interested in. I haven't looked that up; I hope to do so someday.

Chall: Where are these letters that you saw?

Swent: Well, two years ago when San Luis Mining Company was liquidated, they cleaned out the offices in San Francisco; their home office was there. And they ran across a book. Back in the early days, in the 1800s, apparently under Mexican law it was required that all correspondence of a company, or a lot of the correspondence at least, be pressed into a book. These were copies of the letters on very, very thin onion skin paper on pages of this book, about four hundred or five hundred pages thick. It has all sorts of correspondence in it--correspondence from Rawlings himself, and correspondence of just routine orders for equipment and supplies, local correspondence. But only the outgoing mail--no replies. So that leaves a big gap in it. But his personal letters were interesting and give quite a bit of insight into the early days of the property. I wish I had found it years before.

But anyway, when they cleaned out the San Luis offices, they decided to give this book to Stuart Rawlings III who would be his great-great-grandson. But they allowed me to have it first. So I made a xerox copy of it. Most of it is pretty legible, but there are pages that just aren't legible at all, even in the original.

Chall: How did they make copies? Did somebody actually sit down and copy that letter, or did they use carbon paper?

Swent: Well, I think they were written in ink, and they had a pressing--I remember seeing these devices. They had a device that had a large screw on top and a frame. You could put a book in between this plate and the base, which was the same size as the plate, and then screw that plate down on the base, with the book in between and put

great pressure on it with a handle that turned on the screw. In fact, I just saw one over the weekend up here in Mendocino County. I think what they did was they took the originals when they were written in ink and fresh, and put them next to one of these pages and then pressed them hard so that the ink ran through onto the thin paper.

Chall: In terms of the machinery that you were talking about, I'm assuming that was iron or some kind of metal.

Swent: Yes.

Chall: So somebody had to craft those. Did you have tool-and-die people and welders and all that go with keeping machinery like that in use at the mine?

Swent: Well, they always had a form of maintenance shop, of course. In those days, the maintenance was far less sophisticated than it is now. Welding, for instance, wasn't really a technique then. It hadn't been really developed industrially. And, of course, a great deal of the structures were wooden. The equipment itself was iron and steel, but they were mounted generally on--maybe some on concrete bases, but a lot of it on wooden structures also, so that a lot of the damage probably was to the wooden structures rather than to the machinery itself.

But if you destroyed the underpinnings of one of these pieces of equipment you had to go through all the work of mounting it again. It would be mostly carpentry work. And I imagine there was some mechanical work, too. But they didn't do welding then, and they sometimes had lathes and could do turning and making screws and shaping things, spare parts if they needed to.

But most of the equipment was imported from the United States and made up here, generally, a lot of it on the West Coast and taken down. It all had to be in parts small enough to be brought in by muleback, although occasionally they would bring in a large piece by manpower. They would get great long pieces of timber and strap them at the top of this piece of equipment. And you would get maybe ten or fifteen men carrying the timbers on their shoulders. Generally those big pieces came up the riverbed. They couldn't take a piece like that up the high trail; it was too narrow. Even in the riverbed it would take days, and they had to do it in the dry season when the river was passable.

Chall: When you stop to think about it, it seems incredible that all of that could be done.

Swent: Yes, indeed. One of the things I found very interesting was the way they transported the cables for aerial tramways. A lot of the ore was transported by aerial tramways. Some of them were much more rudimentary than aerial tramways are now, but all of them required long, unbroken lengths of cable--seven-eighths or one-inch diameter, maybe an inch-and-a-quarter diameter cable. And the shortest one that I know of was the one that we wound up with in Tayoltita in the latter years that I was there. That required a minimum of a 10,000-foot unbroken length of cable.

So to transport that cable by muleback, they would get one of these big mule trains together and take the rope, off the big reel it arrived on little by little; make up a few coils of the cable and tie them up with wire; then pack the first coils on one side of the pack saddle of the mule, and then run the cable on to the next mule, and put another coil on that mule, and so on. Then they'd wind up maybe with fifty or seventy-five mules all tied together with this one rope.

And then they would come up the other side of the mule train with it so that the load on the mules was equal on each side. So these mules all had to move together. They didn't have to be in step or anything like that; there was enough give or play between mules that they could vary their pace a little. But essentially they had to more or less move together.

Chall: It just took so much special skill, the men--the drivers and animals.

Swent: Well, at any rate, to get back to the flood and its effects, it damaged all the mills in the district. Rawlings's estimate of $200,000 in those days--even if it was a valid estimate--in today's money it would probably be well over several million dollars of damage. I think it was probably higher than he estimated. But he never made a later estimate, or at least I didn't find one in his letters.

Chall: What effect did this have on the mine and him?

Swent: Well, this is legendary, that this started the bad relations between the Mexican Candelaria Company which Burns headed and the San Luis Mining Company which Rawlings was heading up. I can't find anything in his letters about this, so it may not be true. But the story that I used to hear around there was: Burns got very upset over this because he had just closed and given the check to Rawlings, which Rawlings had sent to Mazatlan for deposit, just before the flood came. Then the mill that Burns had bought got wiped out at San Antonio. So the story goes that he sent a man to Mazatlan to try to stop payment on the check, but because of the

flood damage and everything, the man couldn't get there in time. The trails were very impassable and difficult at that time. So as a result he was out the money and out the mill both.

And this is supposedly where the difficulties arose between the companies, which intensified in later years. I'm not sure that this is all true, because there's one letter that I found that Rawlings had written, oh, maybe a year later--maybe a few months later--to Burns; a very short letter that said he'd been away for a while, that is, by "away" he means away from the San Dimas area, maybe up at San Antonio--well, he couldn't have been at San Antonio because they sold the property, but at other properties. Oh, he was over at Joquistita, that was it.

Chall: Where was he?

Swent: A place called Joquistita, where he had originally come from. He wrote that he was interested in hearing news of the election. Now I don't know what election he was referring to. Perhaps it was the U.S. presidential election of 1892. This would be in 1893; Porfirio Diaz was president of Mexico and he may have gone through an election process, but he had been a dictator and he was right in the middle of his dictatorship. It may have just been a formal election. But anyway, Rawlings was inquiring for news of the results of some election. So it doesn't sound as if they were on too bad terms.

Chall: No, it doesn't.

Swent: At the time that my folks went down to San Dimas, or that my mother arrived there anyway, some of the notes that she made and letters that she had indicate that there were at least three American mining companies operating in the area. I'm at a loss to know what the third one was. There was the Mexican Candelaria Company, San Luis Mining Company, which was operating on the other side of Bolanos Mountain on a separate set of veins from the Candelaria ones. But her correspondence indicates that there were three different companies, because in May of 1918 there was a spell of banditry there. She noted that the women from the other companies had been sent out, women and children. And she wound up being the only American woman left in the area, and this was because she was living up on a hillside well above San Dimas and the word didn't get to her, in time, anyway.

Anyway, the company--I don't know what--there was a Guarisamey Mining Company, but that was on up the Piaxtla River above Tayoltita and wouldn't, I doubt--they may have had an office in San Dimas, because San Dimas was in essence the county seat. The

Mexican system is a little different; they don't have counties as such, but they have districts, and San Dimas was the district seat.

At the time she went there they had a telegraph office in San Dimas which had a two-wire connection down to the coast to Mazatlan. From Mazatlan on there was a national grid of telegraph wires. So from San Dimas they could send telegrams but there were no telephones. The mining companies did have their own local telephone systems.

Chall: Just within the district of the mining area?

The San Luis and the Mexican Candelaria Companies, 1900-1979

Swent: Yes. The companies had their own phone systems, the early ones. Anyway, the San Luis Mining Company was just really getting started. Lloyd Rawlings and his son Stuart had gotten it going on a small basis. Mexican Candelaria Company was by far the major and dominant company in the district, and had well-established production and was working away quite well. They had the mill in San Dimas and the mines on the Candelaria vein. They also owned the mines down at San Antonio which they had purchased from San Luis, and also mines and a mill at a place called Contra Estaca, which was further down on the San Dimas Arroyo, near the junction of the San Dimas Arroyo with the Piaxtla River.

These properties were going full-blast at the time, as small-vein mines. They weren't the multi-hundred tons or thousand tons of operation that you get in the Arizona mines and that sort of thing. But for vein mines underground, they were going at a pretty good rate, several hundred tons a day.

Then over periods of time, over several decades, the fortunes of the Mexican Candelaria Company began to fade. The ore bodies got lower grade, costs got higher; San Dimas operations in the Candelaria vein were finally shut down. I'm not sure what year, but probably just before World War II. Contra Estaca kept going and it became their only operation for several years. When it shut down in the 1940s it had become very expensive to operate. This was probably because of poor management. Labor got out of control on them, and they just couldn't handle the problems. So they finally shut down in the early 1940s.

San Luis on the other hand continued to prosper, and they found more and better ore bodies. During the 1930s and into the 1940s they became the dominant company. Then, as Mexican

Candelaria Company closed down its operations, San Luis became the only operating company in the area. In 1948 San Luis Mining Company entered into a lease arrangement with the principals of the Mexican Candelaria Company in San Francisco, and leased the properties in Mexico and then began operating them, paying a royalty to Mexican Candelaria Company on the ores extracted. We opened up Contra Estaca again; that was part of my work. They connected through into the old Candelaria workings from the San Luis workings in Bolanos Mountain.

They actually were able to carry on a quiet stock acquisition program going on over the years; they were just quietly buying up stock from stockholders of Mexican Candelaria Company. Finally they got enough stock that they were able to effect a merger. San Luis Mining Company wound up with all of the properties in the district. The mines are still operating. San Luis Mining Company was liquidated in 1979, and all the interests were sold to Mexican nationals, Mexican corporations.

There was an intermediate period between 1966 and 1979. In 1966 the company was Mexicanized under Mexican law. I'll have to go back a little ways for background on this. Under the Spanish, when the Spaniards were running Mexico, the mines had to pay a fifth of the production to the king. There was probably a lot of cheating on this, but generally it was collected.

Then, when Mexico got its independence, this didn't change. The Mexican government collected the same fifth as a tax. But in later years, they increased some of the taxes. At one point the taxes on silver, for instance, amounted to 33 percent of the gross production. You had to pay the basic tax--it was 19.9 percent, actually, what they called the fifth. Then there was a surtax on that, and then there was an export tax. And of course the silver had to be exported. If you didn't export it yourself, you could sell it to somebody in the country, but eventually it was exported, so they always made the producer pay the export tax. Gold had a similar export tax. In addition, an income tax was added to all that.

When I left there in 1954, I estimated that in the last year between all taxes, that is, what they call the production tax, and the surcharge taxes, and export taxes, income taxes, property taxes, that San Luis was paying something like 72 percent of its gross income in taxes. So the taxation was very high, and mines to survive this had to be high-grade and quite profitable mines. And the San Luis mines were.

Then the Mexican government, in the early sixties, developed a program for what they call Mexicanization. This was their eventual

goal anyway. And they came out with a program whereby if you sold 51 percent of a 100 percent foreign-owned mining property in Mexico to Mexican nationals, then the Mexican government would reduce the taxes by one-half. So this would put the foreign owners back in the same or better profit position as before, and the government would have achieved a goal of getting some Mexican ownership.

So in 1966--it was one of the last things my dad did before he died in January 1968--he made an arrangement to Mexicanize San Luis Mining Company. They sold 49 percent of the stock to some large Mexican mining interests. One of the problems with this Mexicanization program was that at first there were very few people in Mexico who had the money to buy these interests. There wasn't great capital in Mexico. But by 1966 there were a few people who had enough capital to buy into the San Luis venture.

So he arranged to have 49 percent go to these large interests in Mexico City, and of course the San Luis Mining Company held 49 percent. And the other 2 percent he managed to sell to loyal old trusted Mexican employees who would be the balance of power in the new company, to keep the 49 percent Mexican owners from overpowering the American interests.

Chall: But he had to sell them to old trusted Mexican employees, right?

Swent: Yes. And this worked well for many years until a stock market was established in Mexico. I don't know in what year, but this was something new in Mexico. Then the Mexican interests that held the 49 percent decided that they wanted to put the San Luis Mining Company's stock on the market. And this would give them a way of disposing of their shares. Well, what happened was that over a period of several years the value of San Luis's stock went up and got very, very high. The several employees who had held this 2 percent were at retirement age; some of them had retired. They could no longer afford to hold this stock, it had such a high value. Since my dad had died, they were no longer influenced by their personal loyalty to him. So they began to sell it. And by 1979 the 49 percent interest people bought up that 2 percent and they then had 51 percent.

When they got in the 51 percent position, then they became very difficult to deal with. The way the San Luis Mining Company in the United States had been getting its money out of Mexico was by the Mexican corporation declaring dividends. Once these people had 51 percent they began mumbling about not declaring any dividends, and became difficult to deal with. So finally they negotiated a sale of the San Luis Mining Company 49 percent interest to the Mexican national interests at a very handsome price. Then the American company liquidated itself, paying

shareholders $1,000 a share when the price on the market in the United States for the San Luis shares was about $370.

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Chall: Let's see, we just finished with what had happened to the San Luis mine over the years until it was finally sold to the Mexicans.

Swent: Yes. The mine itself is still operating today.

Chall: But it doesn't belong to the United States.

Swent: It doesn't belong to an American group anymore.

The Hearst, Haggin, and Tevis Companies/The Homestake Mining Company

Chall: Now, what relationship, if any, was there between the San Luis mining interests and the Homestake mine, the people who managed the Homestake mine?

Swent: Well, it was a very close relationship. Homestake Mining Company was also a Hearst, Haggin, and Tevis Company. And so both companies were Hearst, Haggin, and Tevis companies.

What these three men would do when they started a new venture was to organize a separate company. They didn't do pyramiding like we do now-a-days and have a parent company and a lot of subsidiaries. They started a separate corporation for each venture. When my dad went to work for them he said the first time he went into the San Francisco office, they had ninety-eight corporate seals of their active companies in the closet. [chuckles]

So both San Luis Mining Company and Homestake Mining were started by Hearst, Haggin, and Tevis. As time went on, these two companies became the survivors of all of Hearst, Haggin, and Tevis companies. The others mostly ceased operation, a few were sold or merged; some went public. Among those that they sold was Cerro de Pasco. That became an independent large corporation with Peruvian mines. Another holding they sold was in Butte, Montana. The sale of this property led to the formation of the Anaconda Copper Company.

What Hearst, Haggin, and Tevis did was to take major interests in each venture for themselves, but they would generally bring in some local people--people who maybe had brought the property to

their attention or were instrumental in getting the property developed or something of that nature. So, they also had different minority stockholders in each of these corporations. Over the range of ninety-eight of them they might have had a thousand different minority stockholders that maybe had stock in only one company.

One of these, for instance, was Lloyd Rawlings. As a result of getting San Luis started, the Rawlings family was given, I think, a 15 percent interest in the property, in San Luis Mining Company stock. This made them very wealthy in the long run. But they had no interest in Homestake, for instance. So as a result, they had to keep them running as separate entities. There was no ability or desire to start combining and pyramiding the way we do now-a-days.

Chall: Well, I knew there had to be some connection, because your father came into Homestake, and so did you.

Swent: Well, the officers were generally all the same people. E.H. Clark, for instance, was the president of San Luis Mining Company, president of Homestake Mining Company, and president of a number of others. He became a major executive officer of all the companies sometime after George Hearst died. I think until George Hearst died he ran them all.

Chall: So that's what's known as an interlocking directorate? Is that what they would be considered?

Swent: Yes. Many of the directors were the same directors. I don't know in the early days who the directors of San Luis Mining Company were, but, in later years when I was around, they had many of the same directors. Donald McLaughlin was a director of both; my dad was a director of both; James Salisbury, who recently died, was a director of both. Archibald Gulick was a director of both. They had the same actual officers, like Bill Boos when I was a kid was secretary of all of them. He did all the corporate secretarial kinds of things. They generally had the same treasurer.

Chall: So even though they were set up as separate companies, they had the same management in charge. What a big office set-up they must have had in San Francisco!

Swent: I don't think it was very big. In those days they ran it on a very decentralized basis. The manager at the property had a great deal of power, much more power and authority than the managers today do. Because communication took so long, they just had to give him a lot of authority and leeway.

Chall: They collected the profits?

Swent: Yes. The main office was just an accounting office, basically.

Tayoltita During the Escobar Revolution, 1929

Chall: I see. Well, should we get now into that story that you want to tell about operating the mine during the revolutionary period when you had to sell and print scrip?

Swent: All right. In 1929, I guess beginning in late March or early April, the Escobar revolution in Mexico broke out. This, I think, was the last of the major armed revolutions. There have not been any major ones since then. There have been a few armed, just local situations since then. This one was a national revolution. As a result of the fighting, communications were terribly disrupted. Telegraph was undependable because some of the wires were cut by rebels. This apparently is normal for revolutionary times in Mexico.

The revolution would give people who really didn't have any political objectives just a chance to get together and form armed bands. And they just did banditry in the name of one side or the other. They would march in and say, we're government troops, or we're rebels, and we need supplies and we need this and we need that, and would commandeer money, food, mules, livestock, and things that could be easily carried.

So, in March of 1929 there was a group in the mountains--well, I'll backtrack a little bit. One of the big families in San Dimas was the Laveaga family. Don Adrian Laveaga was a very wealthy man there. He had a son named Miguel Laveaga, who was a general in Carranza's army. When the major revolution ended in about 1917 when the new constitution was written, he retired to San Dimas, but he was still a general in the Mexican army. But he was a local resident, and he had some fame from an incident that was well established in Mexican history with Rosalie Evans, who was an American. I'll have to look it up and see all that went on there. But he got quite a poor reputation out of that.

At the moment that the revolution broke out, he didn't happen to be in San Dimas. San Dimas, as I said, had the telegraph station. And by 1929 we had a telephone from the company office there right next to our house over to San Dimas, and you could phone the telegraph office and send a telegram that way. In Mexico the telegraph system was owned by the government.

Chall: The telephone was owned by a private company?

Swent: Yes, by San Luis Mining Company. At any rate, he was not in San Dimas when the revolution broke out. He was nearer to Tayoltita. So he came into the office and asked permission to use the telephone to send a telegram, call San Dimas and send a telegram. So my dad told him to go ahead, and he used it. Dad could hear what he said.

When he called he was reporting to the government that he was ready for duty and he had 201 soldiers ready for action. All he had was one personal attendant. But he was apparently drawing pay for the rest of them. So when he finished the phone call my dad asked him, "Well, why did you say 201? You don't have that many, why didn't you just say 200?" "Oh," he said, "they'd know I was lying then." [laughter]

Anyway, he was a well-educated man, and spoke well. So anyway, that was the end of that incident. But then the next month he was wandering up--I guess it was the same month--he was wandering up around the upper part of the Piaxtla, and he was captured by a group of people who said they were rebels, headed by a Colonel Canales.

They decided they would put him up as their apparent head. He was really a prisoner, but he didn't dare try to get away because he would have been shot. They could use his good name, what good name he had, his prestige anyway, by making him the titular head of their gang. And he went along with this.

Then they marched on Tayoltita and came down the Piaxtla River from the mountains. There were some three to four hundred of them. They assembled up on the hillside just above the mill. They came drifting in, you know, three or four or five at a time, all one morning long. We were watching them from our house with the field glasses, and when they got all assembled, then they went down, crossed the river and came into town.

But they didn't head for the office right away. In fact, the gang of them never came into the little area where we lived. They all stayed downtown in the main parts of the town. But two of them, good-looking, well-dressed officers came up. The rest of them had no uniforms. In fact, these didn't have any uniforms either. None of them did. Laveaga was in the lead when they came into town, and we could recognize him through the field glasses because he was wearing the same clothes that he had worn when he came to make that telephone call.

Chall: A strange position to be in.

Swent: Yes. But he wasn't the first one to call. Canales and somebody else were the first ones to call. They looked Dad up in the office. I don't recall hearing just what they said, but they apparently wanted some money, and when they left they were taking a sack of money. There was some change left there at that time.

Later on Laveaga came in. I guess they were paving the way for Laveaga, I don't know. He came in and made more arrangements with Dad over things. I think at one time he started to pull a gun on Dad. I know Dad told a story of a confrontation that he had, and I assume that this was the time.

My dad had a small derringer, which is just a two-bullet little pistol that's about two and a half, three inches long. It could fit in your pocket and not be seen. He always kept it in his pull-out top desk drawer. When he was in a tight situation, such as this when somebody might pull a gun on him, he would keep his hand in the drawer of the desk while he was talking across the desk to somebody. He had this little derringer in his hand so he could bring it up very quickly.

Laveaga did begin to pull his gun to make his demands more dramatic, I guess. So Dad pulled his derringer up before Laveaga could get his gun out, and that stopped it all. There was no more confrontation; he calmed down. But they took some money and then they just took everything they could lay their hands on in town. They didn't take any of the company's mules, and they didn't try to go for the bullion, although the bullion was still in bar form at that time.

Chall: But it was heavy as I recall.

Swent: Yes. Then they stayed, oh, maybe a week. They rounded up everything they could in town, all the livestock. They took such things as chickens and livestock--mules and burros. They ate off the town, of course, while they were there. Then they left, and they really hadn't-- We had an ice machine. This was a great luxury; the company had assembled an ice machine there, and we made blocks of ice. One of the things that we have in our scrapbook is a note from Colonel Canales asking for another piece of ice--by piece of ice, he meant a block.

So the relations were fairly cordial. Then they marched back --left town and went back up into the mountains. Now that was a group that called themselves rebels. So this put Laveaga in a bad light with the government. Later he wrote a letter to Dad, which is in our scrapbook here, asking Dad to write a letter saying--the way he phrased it was, "If it's true, as it is, that I was of help to you and kept things from becoming much worse when these people

came into town back in March--" this was the same year. So I guess Dad wrote him a letter of some sort. I think he was dropped from the army, but never more penalized than that.

That was in March of 1929. So this gave everybody a pretty good scare. We didn't have a chance to get out of town or anything. These people came in very, very fast on us. So the company developed a better scouting system, and had people up in the mountains alerted to give regular reports of the whereabouts of any gangs of soldiers or rebels or bandits.

In May, then, we got the word that there was a large group of about four hundred "Cristeros" in the mountains. "Cristeros" were nominally bands of religious rebels. The Cristero rebellion began after the Mexican government-Catholic Church confrontation began in 1926. The name comes from their slogan "Cristo Rey"--"Christ the King." The Cristeros began by supporting the clergy and raiding and burning government schools, but soon went into other forms of banditry. They carried on throughout the country until late 1929 when the Catholic priests were temporarily allowed to return to their churches.

This band was at a point where they could either come down into the Piaxtla canyon to Tayoltita, or go down into the Presidio canyon, into the mining camps that were over in the next canyon south of us. By this time cash had disappeared. There were no coins, no cash. The company had had to print its own money to meet payrolls. Normally the company got its cash to meet payrolls from Mazatlan.

Chall: You couldn't trust the roads any longer? Is that it?

Swent: Well, no, cash just didn't exist.

Chall: They just stopped making it? There was a government.

The Company Prints its own Money and Recasts the Bullion

Swent: Well, that's it; they didn't really control the country. People were hoarding cash, and it wasn't being distributed, so we couldn't get it. In those days there was no paper money; it was all coin, silver coinage. I assume the reason was that the banks in Mazatlan couldn't get it, so then we couldn't get it. There was great hazard of its being stolen anyway, if you did try to transport it in. So the whole west coast region there was without money, and the company printed its own paper money which my dad and his

assistant manager, a fellow named Carlton Cushman, individually signed--every note. I used to help them a little bit, just handling the stuff and handing it to them and then stacking it after they had signed it, that sort of stuff. They just spent hours doing nothing but signing these notes.

Chall: How did they print the money? What machinery did they have for printing anything?

Swent: Well, they had a small printing press. They were small notes; they weren't the size of our paper money now. They were small things, maybe about an inch and a quarter wide and maybe three or four inches long. It just said, "San Luis Mining Company will pay to the bearer" whatever the amount was. They had one-peso pieces and five-peso pieces and twenty-peso pieces, and I think maybe a few hundred ones; I don't remember. I still have a one-peso piece; I'll show it to you. This scrip was widely accepted. All local businesses accepted it, so the workers accepted it. Eventually it circulated and was accepted as far away as Nogales, some six hundred miles away!

So this was discouraging to the bandits, because they couldn't come in to get cash from us. And this gang in the mountains was apparently much rougher than the one that had come in previously. They had killed a number of people and were really more out-and-out bandits than the first group had been. The first group claimed they were rebels, at least.

Then the other thing--the company decided that in order to keep bullion from being taken, that they would melt what bars were left. They still had quite a backlog of bars that hadn't been shipped. They had been trying to ship them once in a while. They had a few that were ready for shipment, but they were afraid that after those were shipped that if they didn't do something about the ones that were left--they were in a form that could be stolen. These people had mules and horses and they could take them.

So they remelted them and cast them into big ingots. They took old grease buckets about a foot in diameter and maybe fourteen, fifteen inches high, took the bottoms out of them, and welded two or three of them together to make molds for long rolls. Then they remelted and cast the bullion into these molds, and the resulting rolls were huge things that nobody could handle. They just had to be rolled around on the floor of the foundry where they were cast. They used diesel fuel as the fuel for the furnace, and then when they thought the bandits were coming they threw the remaining diesel fuel that they had down the river; just poured it down the river and let it go so that the rolls of bullion couldn't be remelted.

The Residents Leave the Area

Swent: As a result of these things this gang stayed in the mountains. But they got close enough in the early days of May that the company ordered all the women and children and all the men but three to leave. My dad, his assistant manager Cushman, and another man named Lawrence Morel stayed behind in Tayoltita. They were the three top officials there. Everybody else left at midnight. The word came in that the gang was moving towards Tayoltita in the evening.

Now, at that time, we had a hydroelectric power plant way up the river; it was an eight-hour muleback ride on up the Piaxtla River from Tayoltita. There was a telephone there, and we would get telephone reports. But those people were way down in the bottom of the canyon. It was a real box canyon there. The bandits were up on the flatland at the edge of the plateau, some two thousand feet above the plant.

We also had a large penstock that came down to the plant; the water source for the hydroelectric plant was a small artificial lake that had been created by damming a stream on the edge of the plateau. Two large penstocks came down the canyon, a very steep, high-head situation. There was a telephone up there also, at the intake to the penstocks. So we could get word of what was going on on the plateau area, too. Anyway, the word came down through the telephone that these people were making a move to come into Tayoltita, so we all left at midnight.

Chall: Where did you go?

Swent: We rode down towards the coast about-- Well, we rode six hours, but it was such a large group. There were about twenty people, plus twelve pack mules with baggage, and several mules with a few bullion bars. We rode down to a place that normally is about four hours ride from Tayoltita, but this took six hours to do, particularly in the darkness, since we left at midnight.

Chall: All the men, women, and children except those three men?

Swent: Yes, but according to my mother's notes, two other women and one man had left two days before for Mazatlan to try to catch a ship sailing to San Francsico. There were probably a good twenty people in our group. There were four children. There was me and my brother, and a girl named Dora Wark, and a girl named Betty Ann Berry. She was the accountant's daughter.

Chall: So it was really a pretty small community.

Swent: Yes. There were four American women, one Mexican girl, and eight American men, four children, plus several Mexican mozos. There were probably, as I said, about twenty people, plus about thirty-five mules.

Chall: I see. Not a mass exodus as we now think about such things.

Swent: Not from the town, no; this was just the American group. And this place down there where we were going was a substantial place with adobe buildings. There was a permanent ranch headquarters, and people that we were on good terms with and knew. We always tried to stay there when we were riding up and down the trail. It's a place called Braziles. I think the name came from the name of a tree. There is a local tree down there that's called the Brazil, and I think this is an area where Brazil trees grew. It's a hardwood.

At any rate, we went down there and stayed and slept. The men were sleeping on the ground, and the women were able to sleep on cots. Then every few hours, every six or eight hours, we would get messages from my dad in Tayoltita--written messages, usually.

In the meantime, a contingent of four American women and three American men arrived from a Mexican Candelaria Company mining site called Contra Estaca, with two babies--one seven months and one seventeen months old. One of the women was sick and was tied to her saddle.

Finally one message came from Dad saying to keep the mules saddled until ten o'clock at night--I think this was the third night--and that he would send another message in a few hours or come himself.

So he came with Cushman and Morel. They got in about ten p.m. But they still weren't sure whether the "Cristeros" had decided to come down to Tayoltita or go down into Ventanas, into the Presidio River, and raid that camp. In the meantime, word came that they had gone to Ventanas and Tayoltita was spared. Most of us rode back into Tayoltita that same day (May 6, 1929).

Six of the people had already planned to go out to the States, and they continued on down the trail and got out to Mazatlan. They got either the train or ship. I think the ship was more reliable then, and train travel was very unreliable.

So then we went back and settled down, but kept things packed for a long time after that. For weeks afterwards we kept things ready to go at a moment's notice. The revolution was finally over somewhere in late May or early June.

Chall: This isn't the celebration of Cinco de Mayo that we celebrate?

Swent: No, Cinco de Mayo is a holiday commemorating a Mexican victory over the French forces in the 1860s.

Chall: Well, these revolutionary movements lasted a long time. You were somewhere between twelve and thirteen, I figure, about this time. You hadn't yet left for school in Providence. How did this excitement seem to you?

Swent: Oh, I was intensely excited. I remember when the first gang started to assemble--they assembled behind a stone fence around a corn field above the mill.

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I could see them from of the porch of our house. So I ran down to the office to tell my dad. He had an office on the far side of the office building that looked out and had the same view as we had from the porch, and he had already seen them, of course. But I ran down full-tilt to tell him about it. He said, "Well, yes, I've already seen them," and he was very calm. I was really very keyed up. So that settled me down. I was very impressed by how calm he was in the middle of all this.

One of the things that I didn't mention here was that before we knew that the second group wasn't coming in, Dad decided they would destroy all the remaining unused paper money that they had signed and put in the safe. They didn't want this falling into the bandits's hands, because it was being accepted. Once they took it there was no way to tell whether it was genuine or whether it had been stolen.

So we burned it all. That was quite a job. They did this, actually, about the time that we left. I remember they were pulling their hair out--well, Cushman wasn't; he didn't have any hair left. [chuckles] But my dad and Morel were just all upset at having to do this after all the work that they had put into signing them all.

Chall: Yes, there was probably a good stack of your bills still left.

Swent: Yes.

Chall: They didn't print any more after that?

Swent: No, the revolution was over and things got back to normal very fast in late May and early June. Actually, early June was when my mother, my brother and I went out and came up to the States. I

spent three or four months in the San Francisco area before they took me out to Moses Brown school in Rhode Island.

Chall: That was something to tell your classmates, because none of them would have had any experiences like that.

Highgrading: The Never Solved Problem

Swent: No. Now, one of the notes [on the outline] you have here is protecting the mine and community during stable times.

Chall: Yes. Was that something to consider?

Swent: Oh, yes. This was. As I said earlier, the company had a high-grade mine. And one of the problems with high-grade mines is stealing of ore.

Chall: Is that what they call "highgrading?"

Swent: Highgrading, yes. Stealing high-grade ore. And this was a tremendous problem, at least in Tayoltita, and I assume it had been over in San Dimas, because there was a similar situation there, and because of the legend about the reason for the town's name.

Chall: How do people do it? How did the highgraders work?

Swent: Well, it's a constant battle of wits between management and the highgraders. You find out how they're doing it so you stop it. Then they develop new ways, and you have to figure out how they're doing it again and stop that. And it's just a constant continuing battle of wits.

Chall: Were you aware of this when you were a young lad?

Swent: Oh, yes. And it was a serious business. It wasn't just a casual guy putting a little high-grade in his pocket and walking off with it. It was an organized business that meant big money. And as the mine prospered it got bigger and bigger.

Chall: How did they operate?

Swent: Well, one of the things--for an average miner stealing ore, he couldn't do a great deal with a pocketful of stolen ore. And he couldn't really get out large quantities at one time. He had to have a place to sell it in small quantities. So there sprang up people in town who were stolen ore buyers. They would buy it from

these fellows who stole it at the mine--for a pittance, really, compared to its real value.

The buyers would assemble quantities of it, enough that they could then begin to ship it out by muleback to the coast. At the coast they would assemble enough to make a rail boxcar load, and then they would ship that to a smelter somewhere. The main smelter in Mexico for this type of ore was in Torreon, in the state of Coahuila. And that meant the ore had to go on a railroad car usually from Dimas Station down through Mazatlan to Guadalajara, and down further into Mexico and on the national railways to a junction point at Queretaro. There, there was a Y in the national railway system, and there was a line that went up the central part of the country through Torreon, Chihuahua and up to El Paso.

Chall: But you knew all that. You knew that's the way it was done?

Swent: Yes, but there was nothing you could do legally.

Chall: Just little pieces, though, that the men would put in their pockets. Then they would be accumulated by these fences?

Swent: Well, they developed all sorts of ways of getting it out. First they would try lunch buckets--just in their boxes, or maybe in a matchbox or something. The company then took to searching them as they came out of the mine. Then they found that they were hiding it in their hardhats and they had to check all the hardhats and that sort of thing. As I say, it was just a constant battle of wits. Then finally we thought that basically they had stopped all the little petty stuff.

So then they began accumulating high-grade in the mine. When they got enough of it together, they would bribe a watchman. We had watchmen at all the mine entrances, and there weren't very many. It was an adit mine with padlocked double steel gates on all these adits. Those that weren't guarded generally were filled, with broken rock between gates, so that people really couldn't just cut through the locks and open the gates and go through.

So they began bribing the watchmen to let them through at three o'clock in the morning or some such time and come out with a real load, you know, several sackfuls of high-grade. This was a terrible dilemma for the watchmen, because if they didn't do this they were physically threatened. At one point, one shift boss that had refused to go along with this highgrading business was found hung from a cactus tree. The amount of money that they would offer these watchmen was--even though they were paid a much higher level of salary than ordinary employees there, it was still more than

they could save in years of working. It was real money, real high stakes here. So they would go along with it and let it happen.

Later the company got the government to station a delegation of troops in the area. They had about thirty soldiers there. They helped to guard the mine entrances also, to sort of supplement the guards.

Then, in later years, the company hired a real security man who was a Mexican. They made him head of security there. He was a two-pistoled man and quite experienced with the weapons and very smart. He had lots of sources of information and this sort of thing. He had what they called the "confidential watchmen" who were no longer subject to the union rules. They were salaried, and were in addition to union guards and the soldiers.

These fellows were moved around constantly; they were hand-picked by this fellow. His name was Chencho Bastidas. And he was a real tough hombre. He was probably in his forties at the time when I knew him, and he had just a roving gang. They were fairly effective, but it still just went on. It just never stopped; it goes on today, I'm sure. But, as I say, it was just always a battle of wits of trying to find out how they were doing it, putting a stop to that, and then trying to find out how they were going to do it next time. It was a major business.

As for the ore buyers--legally, there was not much you could do. If you tried to press a charge, if you caught somebody and had all the witnesses in the world and everything else to prove that he was stealing the ore, you didn't have much chance. Maybe the value of the ore that you caught him with might be ten or fifteen dollars, something like that. To try to push a legal case with that in a foreign country where nobody paid much attention to laws anyway was just a lost cause. So the company policy was to just fire these guys. If you caught them stealing, you fired them.

The company paid by far the highest wages of anybody. One day when I was working there [during the 1940s] and I went downtown, I saw a fellow that I knew had just been discharged for highgrading, and here he was, acting as a town policeman. So the next time I saw the presidente municipal I told him this. I said, "Gee, you've got a guy on your payroll there," and I named him and said, "We just fired him for highgrading. I don't think he would make a very good policeman for you." He looked at me and said, "Well, you know, we can't pay the wages that the company pays. With the wages that we pay policemen we have a hard time getting policemen. You have to understand that we don't have very much choice as to who we hire as policemen."

Chall: He could bribe all his life, do whatever he wants.

Swent: Yes. So that became a real problem.

Chall: That was the main problem in the mine?

Swent: Yes. Now with regard to the buyers, generally legal action against them was pretty hard because they would all have a claim or two up in the hillside somewhere. They would just say that this production came from their claim. To try to prove any legal cases against them was almost hopeless.

But at one time we had some justice happen there. This is a real good Mexican story. There was a stolen ore buyer named Juan Ley. He was Chinese. As a front he had a little grocery store downtown, in the lower part of town. He would buy stolen high-grade and accumulate it and send it out by muleback. We knew all these shipments, where they were going on, what happened. On one occasion he finally accumulated enough ore at Dimas Station that he ordered a boxcar to load it up and ship it to the smelter at Torreon.

So we tipped the authorities in Mazatlan off to this, and they went down and impounded the car and brought charges against him. The car was moved to Mazatlan and the high-grade, in burlap sacks, was unloaded into a warehouse which was duly sealed. Then they started legal proceedings against this fellow. This was not the company but the authorities bringing charges.

So Juan Ley went down to Mexico City. He had a warehouse receipt for this ore, so he borrowed money against the warehouse receipt and began wining and dining the people that were going to make the decision, the government officials that would finally decide on his case. He began entertaining them and paying them off and stuff. Finally after several months, why, the case was settled and the charges were dropped against him. So he went back to Mazatlan to claim the ore, the high-grade, with his warehouse receipt. They opened the warehouse and there was nothing but sand in the burlap sacks. Somebody had highgraded him! [laughs]

So this broke him; he went broke. One of the things that these ore buyers needed was working capital. This took all his working capital; it wiped him out. He gave up the business. But it's an interesting family. He stayed on in the grocery business there for several years, and he had some nephews who were our gardeners. Ramon and Pancho Ley were the vegetable gardeners for the company. Their garden was right outside the house that Lee and I lived in. They were quite honest and straightforward. He had a

son called Juanillo; it means Little Juan. These four were related, the same family.

In the 1940s, when it became possible to clear a road for heavy duty trucks up the Piaxtla river in the dry season, the company would build the road and then hired a contractor, Francisco Ferreira, to haul all of its freight from a town near the coast named San Ignacio to Tayoltita. [The following story of Juan Ley was added when Mr. Swent was reviewing the transcript.] Pancho Ferreira built up a fleet of White (that's a truck brand name, not color) heavy duty trucks for this work. He also solicited and got the trucking business of the small merchants in Tayoltita, so that he had a virtual monopoly on all the trucking into Tayoltita. After Juan Ley retired to the grocery business he prospered enough that he bought a truck and prepared to do his own trucking.

By this time, the company had also contracted with Pancho Ferreira to build the road each year. When he heard that Juan Ley proposed to do his own trucking, he became very adament that no one else could use the road since he had built it and was entitled to the benefits and profits from it. Mexican law, however, didn't support him unless the road was on private property. So Pancho's only recourse was to physically keep Juan Ley from using the road.

One night Pancho got word that Juan Ley had started out after dark from San Ignacio in his truck with a load of groceries. Pancho sent his son Mario out immediately in another truck with orders to catch up to Juan and shoot out his tires. But Mario never caught up with Juan, so there was no shooting. I saw Mario the next day and he was pretty glum. Juan Ley's successful initial trip was a threat to the very profitable family business.

But Pancho did not give up that easily. Before Juan Ley's next trip, he had sets of six- to eight-inch high steel spike made, extending up from bases of half-inch thick steel plate about eight inches long and four inches wide. He had these buried in the gravel that had been placed in some of the river crossings. These crossings were one lane wide, and soon had ruts formed in them. The plates were buried in the ruts where the Chinaman's tires would be, and Pancho hoped some of the tires would be punctured.

Juan Ley had heard about the plates and spikes, however, so on his second trip he had Juanillo and others in his crew walk barefooted across the fords! They, of course, found the spikes, dug them out, and then the truck could cross. This slowed Juan Ley down, but didn't stop him. Score: Juan Ley 1, Ferreira 0!

To try to stop Juan Ley on his third trip, Pancho had one of his bulldozers build a gravel dam across the river below one of the

deepest crossings, making it so deep that Juan Ley's truck motor should be under water and not be able to run. Juan started out again at night and Pancho awaited some sort of word as to what had happened, but heard nothing. By morning no word had come, so Pancho decided to fly over the site in his Piper Cub airplane. Pancho later told me that when he got to the crossing, the truck was already across the crossing and the whole crew was out swimming in the largest swimming hole in the river!

I passed Juan and Juanillo Ley in the street in Tayoltita a day or so later, so I asked him in Spanish how he had gotten the truck through the deep crossing. He replied, in his broken Chinese English, "Got 'em submarine! Got 'em submarine!" and grinned and laughed, but wouldn't say anything else. I suppose he used some of the techniques used in the amphibious landings in World War II such as covering the spark plugs, distributor, et cetera, with waterproof grease, taking off the fan belt, extending the exhaust pipe with a hose to above water. Score: Ley 3, Ferreira 0!

The action phase of the feud ended at this point. In a year or so several others were trading on the road in their own trucks and Pancho's business was declining. He gradually gave up the business and the company set up a Mexican subsidiary called TATSA (Transportos Aereas-Terrestres, S.A.) to run its airline and trucks. They bought two more 25-ton Euclid trucks, built the road each year, and hauled all their own freight. Bert Brown, the company mechanic, ran this operation very well.

[resume interview] We left in 1954. In later years the Leys finally left and moved to a city on the coast called Culiacan in the state of Sinaloa. That's the state capital of Sinaloa. They all, Juan, Juanillo, Ramon and Pancho, moved down there and continued the grocery business that Juan had in Tayoltita. They did quite well in the new grocery business, and the sons and nephews then got into it.

The old man was getting pretty old. He couldn't actively work at the grocery store, but the three young ones, Juanillo and Ramon and Pancho all went in and worked real hard. They were hard workers. Pretty soon they had two grocery stores, and then pretty soon they had a whole series of them. Eventually they got into having supermarkets. Finally here a few years ago Safeway stores bought 49 percent interest in their chain in Mexico, in Culiacan for several million dollars. So Safeway has gotten into business with the heirs of the old highgrading business!

Chall: Yes! [chuckles] Now were these men, or Juan at least, intermarried with Mexican women?

Swent: Yes.

Chall: They came over as single men, usually, didn't they?

Swent: Yes. The younger ones, Juanillo, Ramon, and Pancho, were all born in Mexico. Only the older Juan and his brother were Chinese born and came to Mexico as single men.

One of the ironies of the Juan Ley saga was that during his father's stolen ore buying days Juanillo Ley became engaged to and married Chencho Bastida's daughter. Chencho was furious over this and refused to speak to his daughter any more.

Housing for Employees

Swent: The question of housing. You had a question about housing for foreigners, staff, and laborers. In the early days the housing that the company provided was entirely for the foreigners. They provided nothing for the Mexican supervisory people or for laborers since these people were already living in town. As time went on the first thing that happened was the foreign staff got fairly large. By "large," I mean maybe a dozen families. They kept having to build additional housing for these people.

Then came the period when they began to have to substitute Mexican-trained people for the foreign staff little by little. As they did that they made the same housing available to them, to the Mexicans. But they still had to keep on building as the business grew and got more complex. So they wound up eventually with about maybe fifteen or twenty staff houses in Tayoltita and several up at the mine sites. These were fairly good houses, the best housing in town, actually.

As the operation got bigger it required more and more employees. I think I mentioned the other day that production rose over the years from about 30 bars a month up to 180 bars a month. This all represented an increase in the amount of rock to be broken and handled and moved and milled and disposed of. It meant getting more and more employees, and there weren't enough people in the community already housed, so that meant they had to start building housing for hourly pay employees.

Then somewhere around 1938 there was a big union movement in Mexico, and the mines became unionized. Up until then it had all been non-union. One of the requirements under the union contracts was additional housing. This was usually sort of mass-type of

housing, where each employee would have a room or two. They would build a long building that would just be divided up into two-room units. They did have elementary plumbing and they had community facilities for bathrooms and for washing clothes.

Chall: How about the kitchens? Was that a community kitchen?

Swent: No, they would generally have a facility for cooking in their own unit. And they built units, both in Tayoltita for the millworkers and up on the mountainside for the mine workers, way up near the mine portals because the major number of workers worked in the mines.

Chall: Were those the standard adobe houses?

Swent: Well, they were concrete floors and adobe walls and sheet metal roofs. Just very standardized; every one was the same as the other one.

Chall: What did you do about sewage and garbage and things of that sort?

Swent: A lot of the sewage went into the river. Garbage was just disposed of over on dumps that went down into the river. The river was the great disposal. For many years all the tailings from the mill--that was the ground-up ore, after the gold and silver had been removed from it--they were all dumped in the river, too. So that for many years the river, when it passed the mill, just changed color. It went from a clear water river to a milk-white stream. It was milky white all the way down to the coast except in the rainy season.

When the rainy season came along, there was so much dirt from the mountainsides getting washed in, that the river turned brown and that overcolored the tailings. In the dry season, when the amount of water in the river was small, why, the tailings would tend to settle out and pile up on the riverbanks. But every year when the rains came along, then they would just get washed away and taken on down to the ocean.

Chall: So it didn't change the shape of the river? Over time I would think it might have changed the shape of the river, the course of the river flow.

Building the Airfield Using the Tailings

Swent: No, I don't think it really had much effect that way. One of the reasons that the company eventually quit doing this was that back in the thirties, when they decided to build an airfield there, they needed a lot of fill. And they decided to use the mill tailings for fill. This went on for several years, and then even after the airfield was built (and that's a long story which I'll go into at a different time), they then kept extending it. So this gave them a use for these tailings for many years.

When the airfield got fairly operational, then it became a matter of economics. They began letting the tailings go down the stream part of the year and then another part of the year they would pump them up--usually in the dry season they would pump them up and extend the airfield. But it was cheaper to let them go down the stream.

But by 1948 we had developed trucking up the riverbed in the dry season, and we had a very capable master mechanic named Bert Brown. He complained bitterly about these tailings being dumped down the river, even in the rainy season, because he said that they were still depositing in the stream. When the trucks made these crossings--they had to make numerous crossings to get up there, and by numerous I'm talking about maybe one hundred or more times crossing the river--these tailings got stirred up and got into the brake linings and wore out the brake linings and the brake drums. He did a lot of calculations and finally convinced our manager that it was a losing proposition, that it was cheaper to pump the tailings up to the airfield than to replace all these brake parts. Bert made his point, so we then made it a policy to pump all the tailings up to the airfield. Then, of course, in later years the government began adopting environmental regulations and laws, and you would have had to do that anyway.

Chall: Then what did they do with them? You wouldn't throw them in the river.

Swent: No. They're just stacked up on land to extend and widen that airfield. Originally the airfield was a one-direction runway, and now, the last time I was there, you could land in at least two directions. I don't think they'll probably go much beyond two directions, but it makes the field longer and safer.

Chall: Is there any thought that the tailings might someday have some value?

Swent: There is a little value, but certainly it would be very difficult to reprocess. It's a pretty efficient metallurgical system they have there. They've recovered about 95-96 percent of the gold and silver and the cost of re-treating those would be pretty high in that area. Tailings have been re-treated in many places, including here in California and in many other places in the world. But they generally have been tailings from primitive-type metallurgy. The recovery was nowhere near as high as modern recoveries. They might have achieved, you know, 50 percent or 60 percent, that sort of thing, versus the high 95-96 percent that they get down there now.

Chall: Now, you mentioned an airfield coming in in the thirties.

Swent: Yes. It was an idea that came about in 1929. I guess the idea maybe was generated in '28, but they started trying to build the field in 1929. There was a cornfield on a fairly flat but still sloping area that was behind the mill, upstream from the mill. The Piaxtla River there makes a great big U-turn and the mill and the cornfield were on this point that came out, that the river went around. It was somewhat flat, so they flattened it more and tried to make it level. The company used scrapers to move the dirt, move it around, and dig into the hillside and do the cutting where they had to. They finally had a space that was about six hundred feet long. This began about the time that I left there. I'm very familiar with it because Dad took a lot of movies of it, and they are a great record.

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At any rate, they were ready, I guess around December or so, for a trial run. They had a fellow named O'Donnell that owned a Waco biplane who said he thought he could land on it. It was about six hundred feet long, and maybe two to three hundred feet wide, and the approach was from down the Piaxtla. You came up the river canyon, approached the field and tried to land on it. At the far end after you went across this long point on the river, at the other end, was a big cliff, and it went straight down to the river. So if you overshot it, either you had to be able to take off fast or else you went down into the river.

At any rate, he tried it and the field wasn't long enough. So to keep from going over the end and down into the river, he locked his brakes and turned the plane up on its nose. It had a wooden propeller, and this broke the propeller. That was basically the only damage done, but you couldn't buy a propeller in Tayoltita. So he had to send to Los Angeles for a new propeller.

All in all it took about a month for it to get shipped, and down to Dimas, and come in by muleback, and be there. It had to be

made to begin with. He finally installed it and took off. But he said, "I still think I can land here; I'm going to try it again." So after he took off he made another trip in, tried the landing again and he had the same result. He had to lock his brakes and turn it up, and he broke the propeller again! [Chuckles] So he had to spend another month there.

The field at this point was all built on solid ground, on dirt. So, at this time the the company decided that it had to be extended. To extend it they had to do a tremendous amount of filling. They decided that they could use the tailings for that. This was a good source of fill. The tailings amounted to, around that time, maybe three hundred tons of solids a day. Of course, those solids didn't come out of the mill as solids, they came out as a slurry.

Chall: It was a slurry then that you pumped?

Swent: It was a slurry that was pumped up.

Chall: Yes. I couldn't figure out how you developed the tailings. So that's it; that makes sense.

Swent: I've assumed too much knowledge on people's part here.

Chall: I know what slurry is and I also know what tailings are, but I hadn't put it together.

Swent: Well, you see, tailings piles are dried-out slurries. They're allowed to dry out, and that just leaves you a sandy substance.

At any rate, to extend the field they built a bunch of earth dams. They dug into the mountainside, made a big hole in the mountainside and developed a very elementary mining system. They just broke rock--broke really very oxidized rock, it was mostly dirt--and let it pour down into mine cars. And they laid rail out; as they advanced this little dam, they just laid more rail on top of it.

Then, once they got an area of ground impounded by a dam, they would pump the tailings behind the dam and against the front end of the airfield. While that was being filled, they put another dam, say downstream of the first one, and they kept making dams like that and putting in tailings. They would put in maybe a foot or so of tailings at a time and then let them sit there and dry. So you had a whole bunch of ponds, like stairsteps, one below the other, going down maybe for a length of a thousand feet.

Chall: You mean they had to build that airfield up from the lower end?

Swent: Yes, it was very sloping ground. Even then they didn't make the airfield level. They put it on a 6 percent grade. A summer job I had when I went back for summer vacation from school in 1931 was laying out the grade. I was in charge of running the transit or a surveying instrument with which I laid out the grade. Then they had a crew that was putting clay on top of the dried-out tailings up to the grades that I laid out. So I know it was 6 percent.

But as I say, they had maybe twenty little ponds of tailings in different stages of drying. Then when the first one would get dry, they would go back and put some more tailings on top of it, and go on down the series of ponds and stairsteps and raise them another foot or so. This took all of 1930-31. They finally had the field ready for another landing attempt in December of 1931. I was there on Christmas vacation at this time. I had been there in the summer, doing the leveling work.

Establishing Air Service

Swent: There was a pioneer airline in Mexico at that time, an American airline called the CAT (that meant Compania Aeronautica de Transportes), SA (which means Sociedad Anonima), an incorporated entity, in Spanish. Dad got them to agree to try a landing there. The day came when they were supposed to do it--this was late in December, just after Christmas. The whole town went over to the field, hundreds of people.

The field was now composed of about a thousand feet of 6 percent grade runway and then maybe six hundred feet of flat runway. So there was a vertical bend in it. Everybody went up, and we sat up on some observation benches and things that were there along the side of the flat part. This bend in it was far enough away from us that you couldn't see over it and you couldn't see the lower part--you could see a little way over, but you couldn't see very far, and you couldn't see the lower end of the field.

The plane came in, and it was a very slow Ryan high-wing, single-engine plane, called a Ryan Brougham. It circled the field a couple of times and then went down the river a ways, turned around and came up the canyon, and disappeared from our sight as it went below the vertical bend as it came in and came down to land. We waited up there, and waited and waited for the plane to show up, to come up the runway, and we never saw it.

So finally some of us ran down and looked over this hump, and there was the plane sitting way down on the runway. He had only used about two or three hundred feet of it to land. With the grade helping him--he was landing uphill--why, he had stopped early and he wondered where everybody was. The pilot was out looking around, wondering why there was nobody to meet him!

Chall: Right, awaiting a big celebration in his honor.

Swent: Yes, and everybody was up at the other end of the field!

I should go back a little ways on this grade business, though, the 6 percent grade. Now before they tried that, they didn't really know whether a plane could land uphill like that or not. So, on one of his trips up to the States here, Dad tried to find out. He asked around as to who could tell him, somewhere in San Francisco. Somebody said, "Well, why don't you go out to Crissy Field in San Francisco and look up the general in charge there and see what he can tell you." So they arranged an introduction for my dad, and he went there and told the general the problem.

He [the general] said, "Well, I don't know myself, but we have a fellow here that may be able to help you." He sent for somebody and this young officer walked in and he said, "Mr. Swent, this is Lieutenant Doolittle." So they put the problem to him, and he said, "Well, yes, I think you can do it, but I'll go out and try it somewhere. I'll find a place where there's a grade and I'll see if I can land on it." So he did, and he came back and made a report that yes, it was feasible to land on a grade of around 6 percent. So then they went ahead and designed the field that way. (Lieutenant Doolittle was the pilot who became famous in World War II for leading the first U.S. bombing attack against Tokyo.)

Actually, it's a little tricky to do that type of landing because when you lower a plane's tail you get closer to the stall point of the airplane. If you lower the tail of an airplane too much while it's flying it slows down and the plane loses its lifting power and will just fall. That's what is called stalling an airplane. This was almost a stall position but not quite. That was the tricky part about doing it.

The landing, of course, was dangerous. As people came in, people who weren't used to doing this, used to landing on a grade--they would see the ground at eye level ahead of them and think they were down at the ground level. Actually there were more feet below them than they expected. They would cut their power and then the problem was that they would fall to the ground and have the real possibility of damaging the landing gear. So it took a little training for the pilots.

Chall: Did you eventually level that out, or is it still on that grade?

Swent: No, it's still on that grade. The pilot that brought that Ryan Brougham in was a fellow named Lowell Yerex. He was a New Zealander and had been in World War I in the Royal Canadian Air Force in Europe. Then after the war he was doing stunt flying in the United States, and then went to work for this airline in Mexico. An excellent pilot.

Chall: How then over the years was the airport used?

Swent: Well, the real sad story, I always thought, was that this was in late December. I had to go back to school, and they couldn't arrange air service quite that fast. They said they would have it the next week, but I had to ride out by mule to go back to school. To me, that was the saddest part of the story!

The real tragedy was the death of Carl Cushman, Dad's assistant. He decided to learn to fly and while on vacation in Los Angeles he took lessons and began building up solo hours. One day as he was coming in for a landing in Los Angeles another plane also came in slightly above and behind him, and the pilot didn't see Cushman's plane. This plane's propellor sliced into Cushman's and killed him.

In early January the airline began service from Mazatlan. They were running to Mazatlan from Torreon anyway, so they began giving service once a day. This went on for about a year. The pilot who came in and was actually the second one to land there successfully was a fellow named Gordon Barry, who was only twenty-two at the time. A very capable, very careful pilot. He gave the service daily, because he learned how to land there.

Chall: I see. So these were one-engine, two- or three-seaters?

Swent: Well, as their basic aircraft, that company was flying what was called a Lockheed Vega. I think that had six passenger seats. I don't remember what their cargo capacity was. But they began the service with that. That went on for, oh, a year or so. Then CAT went bankrupt. The president, Mr. Hull, went to the States to get another airplane and on the way back he crashed and was killed. He had been the guiding light of the company, and I guess from there on things went downhill fast in the company. They went bankrupt.

In the meantime San Luis Mining Company, in order to get bigger cargo planes in there, had bought a very large single-engine plane called a Bellanca Airbus. This was one of the first ones in service. They had brought it down for CAT to fly, but it belonged

to San Luis. But CAT was using it, and they had it over at Torreon at the time that they went broke.

Of course, going bankrupt didn't come up suddenly; you could see it coming. So Dad cast around and started interviewing some of the pilots to decide to hire one if they did stop service. He decided on Gordon Barry. There were two or three who were eligible for it, but he finally decided that Gordon, even though he was young, was the most cautious. He wanted somebody who was very cautious.

So when the day came and they closed down, the Airbus was in Torreon. Gordon telegraphed my dad and let him know what was happening and said the Airbus was there, and did he want it flown to Tayoltita? Of course, Dad wired back, "Yes."

Apparently there was a great deal of politics behind this very sudden shutdown. Pan American was competing with CAT, and they wanted to take over the routes and the equipment. All the equipment was under guard by soldiers. The government had put out a--I don't know, a platoon or so of soldiers to guard all the equipment, including the Airbus. At first they wouldn't let Gordon take it. So Gordon got hold of the company attorney in the city of Durango and he came over and arranged for-- I don't know what he did, and Gordon doesn't either, but he assumes that there was some payoff somewhere. He told Gordon to go out very early the next morning before light and take the plane and just leave. So Gordon did that and then flew it over to Tayoltita, got there around daybreak.

The landings in Tayoltita, because of the canyon, can only be made normally in the morning. The early morning is the best flying time. Because after the sun gets up and warms the air in the canyon it becomes very turbulent. It is quite risky to fly in this narrow canyon in that turbulence. The turbulence exists right down to ground level. There couldn't be any missing of the airfield; it was only one runway wide, and with these wind currents and everything, if you happened to be in a downdraft at the wrong moment, you might crash into the mill instead of making it up to the field, and that sort of thing. So they limited the flying to the hours from the time after it got light until maybe 9:30, 10:00 in the morning when the winds begin to spring up. Then the rest of the day there was no flying.

Sometimes, especially in late December, we would have three-day windstorms. The wind would start blowing at 5 or 6 a.m. and blow all day, then die down at dusk, only to start again early next morning. This meant that planning a trip with an exact starting date was a matter of luck.

So Gordon Barry came over and started operating on a salary basis for San Luis. This wasn't very much of a challenging job for him, but at least he wasn't unemployed the way some of the others were.

Lowell Yerex wound up without a job and broke. The company hadn't paid people for several months before they went bankrupt. Dad went to Mexico City soon after. Yerex did have a small plane. I don't know if he owned it or not, but he wound up in Mexico City at the same time that Dad was there. Yerex didn't have any money, didn't have any gasoline, couldn't go anywhere in the plane. So he called on Dad and asked if he could borrow $500 to buy gas and get out of the country. So Dad lent him the $500 and Yerex took off and went down to Central America.

He had started doing barnstorming, you know, taking people up for fees, and this sort of thing. Then they had a revolution in Honduras. He was hired by the president of Honduras to drop leaflets over some of the rebels. He did this and they began shooting at him. One bullet hit him in the eye and took out his eye. I think it was the left eye, actually. So he was one-eyed after that. But he went on and landed. This earned him a lot of gratitude from the president of Honduras.

Anyway, he went on and got concessions to start a little airline. Eventually he worked up a very successful, small but well-known airline called TACA. I think the name is still used today. It served all of Central America. TACA stood for Transportes Aereo Centro Americanos--Central American Aerial Transport. It became a multi-plane operation and Yerex became quite wealthy.

I remember one day after my dad had purchased a house here on Lincoln Avenue in Piedmont and I was visiting--I was working in Mexico at the time--I went to the door when the bell rang, and here was Lowell Yerex after all these years, come back to chat with Dad.

Chall: Those people who started out at that time in flying could do well over a period of time.

Swent: Well, Gordon Barry--to finish his story. This thing was pretty boring for him after a while. He used to fly in the morning and then he would be through at 9:30 or 10:00. He would come back and he would lie out in our garden. We had a lot of lawn there, and trees, but there were clear spots. He would lie out on his back on the ground and just seemed to be loafing there.

One day my mother scolded him. She said, "You ought to do something better than just lie out there on the lawn all the time."

And he said, "Well, I am. I'm not sleeping. I'm watching the buzzards fly around and watching the air, how they use the currents in the canyon." He got to know those currents excellently, and he became an expert on them. He could land at any time of day if he had to. And there were occasions when he had to. He even landed at night with a few lights to spot where the field was, but not very many. So he wasn't really wasting his time the way Mother thought he was!

But it still was boring for him, so the company bought another plane, a smaller one than the Airbus. The Airbus got burned up in Torreon, on a trip out there. Some gasoline was spilled on it and it caught on fire and was a total loss. The company then bought other planes. At this time my dad told Gordon that if he wanted to buy these planes, he could. They would dedicate a certain amount of his salary every month to buying an interest in these planes.

Well, he worked there long enough that he bought the two planes. He owned them completely. So then he shifted to Mazatlan. He took the two planes to Mazatlan and used that as his base, and began running into Tayoltita. He would come out in the morning and do his work, then during the rest of the day he would fly other places.

He started his own little airline there. Eventually he rebuilt that into a major airline called LAMSA--Lineas Aereas Mineras SA--that means Mines' Airlines. He started flying back over the routes that CAT had had, and eventually he rebuilt the entire CAT structure, which Pan Am had never been able to do. They had taken over the planes from CAT but they had never been able to get the concessions. Gordon gradually took them over.

One of the reasons Gordon did so well was he married a Mexican lady named Judith Martinez from Mexico City who was very well connected at high government levels, and she was able to help him a great deal. He made her president of his company. Gordon was a good pilot and an imaginative person, but he didn't have the contact with government that she had. As president of the airline she was able to talk with authority. With her contacts she was a great help in obtaining all these permits that he needed.

Then during World War II spare parts were a terrible problem, and he had to do a lot of improvisation. He was very good at it. He had some excellent employees who were very capable. At any rate, after the war United Airlines wanted to go into Mexico and have an operation down there. So eventually, somewhere around 1945 or '46 he sold 80 percent of his airline to United Airlines, and kept 20 percent for himself. But as time went on he didn't like the way United was operating it, so he sold his 20 percent. Then

LAMSA was eventually absorbed by Aeronaves de Mexico, which is one of the principal existing airlines down there now.

Then Gordon retired and they lived over in San Rafael. Judy died about three years ago. Gordon is in sort of bad shape now; he's in a nursing home and I'm his conservator. I have to go in and take care of his finances and occasionally go over to visit him at the nursing home.

Chall: Did he have children?

Swent: This was one of the sad stories. He had one child, Gordon Jr. Gordy, they called him. This is probably why his wife died. He died young of hepatitis. I think actually what he had was acute alcoholism, cirrhosis of the liver. Gordon is a heavy drinker, and Judy had not been, but in her later years after their son's death she was always on liquor, wine or something. She died of acute alcoholism.

Chall: That's a sad story for such an enterprising family.

While you were in Mexico during the forties and early fifties, how did you use the airfield? By that time was it more than just one or two small planes in a day?

Swent: Well, it's always been limited to fairly small planes.

Chall: Did you use it for transportation for the family and others, to get in and out?

Swent: Well, they eventually established--at first when it was a company airplane, of course, then it was just company traffic and this sort of thing. They did sell tickets and give other people transport, but they had to get a permit for that. When Gordon took it over, he did all of this. He sold tickets and there was a general scheduled airline service. Then when Gordon sold out, Aeronaves de Mexico gave service for several years. Finally their service got very poor and they gave it up. Then the company bought its own planes again. This was about 1948.

In 1948, when I was there, we bought a Ford Trimotor for $5,000 in Florida, which was terribly corroded from salt air. The $5,000 included the cost of flying it out to Los Angeles. Then we spent $60,000 getting it into shape. [chuckles] But we wanted a Trimotor; this was what we had been looking for, because it had the safety that was needed and it had a cargo capacity that was larger than anything that had been used before. But it was slow enough and it was maneuverable enough that you could get it into this canyon and onto the runway.

Bert Brown was the person who oversaw the purchase and overhaul of the Trimotor. Bert had a remarkable combination of skills and experience that made him an ideal employee for the company. At one time during the Depression, he had worked for Selim Woodworth, a consulting metallurgist where they were re-treating old gold mine tailings with a cyanidation circuit, so he was familiar with the equipment in use at Tayoltita. He learned to fly and in World War II became a flying instructor for the U.S. Army. Later in the war he worked up to ferrying the new big four-engine B-29's across the Atlantic and Africa to India.

After the war Woodworth recommended him to Larry Morel for the job of master mechanic at Tayoltita, and Larry hired him in 1946. So since he knew airplanes and flying, in 1948 Larry Morel made him the head of the San Luis air and truck transport subsidiary, called Transportes Aeros Terrestres, SA (TATSA for short) when San Luis bought the Trimotor and also began to operate its own large trucks up and down the river in the dry seasons.

Before the Depression, Bert had served in the U.S. Marines in Peking and saw exciting times there as the "last emperor" was forced out and left.

A Memorable Series of Events: The Winnie Ruth Judd Story

[Date of Interview: July 10, 1987] ##

Swent: There was one event in 1929--well, not an event; it's actually a story of a series of events. In 1929 the company doctor was a Dr. Judd. I don't remember his first name.

Chall: Well, that's in the record.

Swent: His wife lived with him there, Winnie Ruth Judd. The doctor was about forty-five or forty-six years old, and she was about twenty-two. Very good-looking, thin, medium-sized young lady. She had been raised on a farm, I think in Indiana, and apparently was not too much in love with the doctor. She very openly said that she married him to get off the farm. They lived in the upstairs part of the hospital which I think I previously described. She was very friendly and used to have me come down and play checkers with her and things. We had a few incidents there. One time, I remember that she had a little kitten. It was warm weather and she was wearing a short-sleeved dress, and the kitten crawled up and got on her arm and apparently scratched her arm. She just got furious, and she reached up and pulled the kitten off the arm and just threw

it down on the brick floor, which struck me as a very cruel thing to do at the time. The kitten survived.

At any rate, to go on with other incidents: I had measles at the time, and Dr. Judd treated me for them. I was in bed for a couple of weeks until they cleared up. After the bandits came in, in May of 1929, and they left (the revolution was pretty much cleared up within the next month and things got back more to normal), my mother and I were scheduled to leave Tayoltita and go out to Mazatlan and take a ship up to the States in preparation for my going to my preparatory school at Moses Brown, which we'll go into later.

We did that in June. One of the reasons for getting out then was to try to beat the rainy season. The rains usually come in late June; it begins to rain and the river rises and you can't use the river trail. After that you have to use the high trail, which is a longer trail by several hours of muleback riding.

At that time my father had had to fire Dr. Judd. He was ill, and he apparently was using some of the hospital drugs and had become addicted to them. So he was fired and he had to be taken out of town on a stretcher down to Mazatlan. Apparently they sent him out alone, and I don't remember exactly when, but in June when Mother and I left, Mrs. Morel (the wife of Lawrence Morel who was my father's assistant) and Mrs. Judd, my brother and I, all rode out together on muleback.

There were a couple of things. At one point we were going down, riding through the riverbed where there are lots of boulders and things; the trail is just sort of veering, winding around the boulders and that sort of thing. Just the smaller rocks have been thrown out of the way. She was riding along with her feet out of the stirrups. My mother warned her; she said that she should really have her feet in the stirrups, because if the mule stumbled she would be likely to fall off. She said, "Oh, I was raised on the farm and I used to ride bareback. I'll be all right."

Well, sure enough, after a little while the mule did stumble and she went right over the head of the mule and fell onto the rocks. She had a whip in her hand. She got up immediately. Of course, when she fell she had let go of the reins. She didn't bother to take hold of the reins, but she went to the rear of the mule and just whipped the devil out of that mule, and so it started to run. It ran down the trail and left her on foot. So I had to chase the mule down on my mule. I got hold of it and brought it back to her. She immediately took the whip and did the same thing all over again. Again, she hadn't grabbed the reins. She just whipped the mule and it took off down the trail again. So I went

down and rounded it up again and brought it back to her. This time I made sure that she got on it and didn't let it go again. That was all there was to that incident. But again, it showed a peculiar reaction; a real temper is what you would call it.

Then after a day and a half of riding down the trail we arrived at a ranch called San Juan (that's a very common name in Mexico) that belonged to a person that we thought a great deal of. It belonged to a man named Pancho Bastidas. Pancho is actually a nickname for Francisco. Pancho Bastidas was a character in his own right. He was a barely literate rancher who had amassed local wealth and was one of the wealthier individuals in this particular area, the coastal plain there. San Juan was on the south bank of the Piaxtla River, near a town called San Ignacio in the state of Sinaloa.

One of the things that he did was he had amassed a large number of mules and was one of the principal freight carriers up and down the trail. He carried lots of equipment and supplies into Tayoltita and he was a contractor to San Luis Mining Company for freighting. He was a very reliable and very honorable man, and my father thought highly of him. There was sort of a personal rapport between him and us. He was the one whose mules usually took out the company bullion. He was at the ranch at the time, and he was so very happy to see us. He escorted us in to stay in their home there. He announced that this was a very appropriate time for us to arrive, because he had just finished building a hot shower. The ladies, my mother and Mrs. Morel and Mrs. Judd, would be the first ones to use it. They could break it in. So this sounded fine to them; a hot shower sounded very good.

Well, what he had built was out in the patio of the house. He had built a single room, just four walls. On the roof there was a great big barrel, and on the back there were ladders leaned against the building. They would heat the water in buckets over a fire and then men would carry the hot water up in buckets and dump it into the barrel, and there was a pipe running down through the roof and into the room itself with a little valve. You could get in there and turn the valve on and then you got a warm shower.

The ladies thought this was great. My mother was to be the first one to try it out. And she went out to get into it and found that there was no door on the open side and no shower curtain or anything. Don Pancho saw her being a little bit hesitant to use it, and he wanted to know what the problem was. So she said, "Well, there's no door. I can't be standing in there undressed and having people able to see me there." "Oh," he said, "don't worry about that." He normally carried a cartridge belt around his waist and had two pistols in it. So he said, "I'll stand guard." And he

drew the two pistols and crossed his arms and stood at the doorway. And he said, "Nobody will look." [Laughter] So she believed him, went in, and took her shower. Then Mrs. Morel and Mrs. Judd followed, and he stood guard for all three of them. I'm sure no one looked!

Well then that evening we had a great discussion. Well, I should go back a little ways. This was the end of the mule trail. At this point we could now take a truck on into Dimas Station where we would get a train that would take us to Mazatlan. So we were to take this truck very early in the morning because the train came in at something like 8:00 a.m. to Dimas Station, and we had to leave the ranch at 4:00 or 5:00 in the morning in order to make the train. At dinner he was telling us about the fact that there were still some problems with bandits in the area between the ranch and Dimas, and that we might run into them; he wasn't sure.

Mother had a lot of silver. She had brought along several bags of silver coins. There was no paper money at that point; the company had stopped using its paper money since the coins had appeared. These were fifty-centavo and one-peso silver pieces. But she had a couple of bags of them and she just didn't know what to do with these. Mrs. Judd had a hundred peso gold coin, and she was perplexed as to what to do with that.

Well finally--I guess Mother stewed about this all night, and the next morning she started stashing these coins around in her riding boots. She got them so heavy she could hardly move, but that's the way she hid most of them. Mrs. Morel did likewise. When Mrs. Judd showed up to get on the truck, after we got going, my mother asked her what she had decided to do with her hundred peso gold coin. She said, "Well, if they find it, they're not gentlemen."

We did get stopped on the truck, somewhere down the way; it was still dark. There was big consternation; everybody thought this might be bandits. The guy stopped us and wanted to search the truck. But it turned out to be a fellow that was looking for his daughter who had eloped and he thought she might be on board. He was out trying to find her.

Chall: Where did you ride on the truck? In the back? Was there enough seating inside for all of you in the truck?

Swent: I think I sat up on the front seat. We couldn't all sit there. I'm not sure whether it was my mother and I who sat on the front seat. There wasn't room enough I don't think for the two women, but I was only twelve years old, so I didn't take as much space as one of the women did.

As I remember, there were benches on the bed of the truck in the back of the cab. But it was all quite open. These early trucks were open and it was subtropical weather there. You could talk from the front seat to the people in the rear seats--or rather, on the benches, not rear seats; there were no seats as such.

Well, we got on down to Dimas and took the train on to Mazatlan with no further incidents. Basically we went to the same hotel with Mrs. Judd, the Belmar Hotel, which is where everyone stayed in those days. That was the hotel in town. We didn't see much of her after that. We saw her running around. She eventually took a ship out to San Francisco, and I think we took--yes, we did take a ship out also. We did not go by train. We took the trip by ship. But we saw very little of Mrs. Judd after that.

That was 1929. I remember when I was in school at Moses Brown in 1932-33, seeing stories in the newspapers about a Mrs. Judd who was accused of murdering three persons in Arizona. I wasn't paying very much attention to the papers in those days, but it did make headlines enough so that I saw it in the Providence Journal. When I got home and saw my folks again I talked to them, and I asked them if this was the same Mrs. Judd who had been at Tayoltita. They said, yes, it was.

She gave interviews once she was in jail and mentioned her sojourn at a mining camp in Mexico. She never named any names; she just said that people had been very nice to her and kind, and that the manager and his wife had been very kind to her. She didn't mention that her husband was fired, but said he was sick. Apparently by the time of this murder accusation, she and he were separated anyway.

Now we'll have to go to forty years later. When I came out from New Mexico in 1966--that's when I was transferred by Homestake Mining Company from New Mexico to the corporate offices in San Francisco--my father was living in Piedmont, which is an East Bay suburb of San Francisco. He lived at 59 Lincoln Avenue. Across the street, at 40 Lincoln Avenue, there lived a Mrs. Nichols, who was quite wealthy. She was a widow, probably at that time close to ninety years old, but very much in charge of things, although somewhat physically weak. She had a housekeeper and two little dogs. The housekeeper was named Marian Lane. My father was a widower at that time and had a housekeeper named Nilene Peak.

Well, Nilene and Marian, as housekeepers across the street from each other, got acquainted with each other and quite friendly. Marian occasionally brought the two little dogs over on leashes. They were quite well trained. She said her son had taken them to a

school and had them trained. She was demonstrating how well trained they were and that sort of thing.

Then we bought a house that was just about a block away. In fact, it was next door, right back of Mrs. Nichols's house. Our entrance was on King Avenue, but our side was on Lincoln. We could look right down over the Nichols's house.

Marian Lane was used by lots of people in the neighborhood as a babysitter. She offered her services to us; we had four children and one of them, the youngest, Jeannette, was still at an age where we needed a babysitter sometimes. We never did happen to hire her, but she came up and visited with us once. She said, "You know, I knew you when you were a child." I said, "Oh?" "Yes," she said, "I was a friend of your mother's." I said, "Well, when did you know her?" I knew that she hadn't known her at the time she died. My mother died in 1951 and this was 1969 now. And she hadn't been working at Mrs. Nichols's all that long. So I said, "Well, when did you know her?" She said, "Well, I knew her back when she lived in Mexico." I said, "Where did you know her?" She said, "Well, I visited there once, visited her in Tayoltita."

This had me somewhat perplexed. Mother had many visitors. She had some friends and relatives that came down to visit her even before the airplane days, although she had more visitors after the airplane, of course. But most of those visitors I remembered. Whenever somebody visited down there it was an unusual event. But she wouldn't mention the date, what year it was. If she had said 1929 I would have realized who she was.

But at any rate, in late June of 1969 when we were away--Well, I should go back a little ways. Mrs. Nichols died, but she thought enough of Mrs. Lane's services and everything that she left her a $10,000 bequest. Mrs. Nichols's daughter was very grateful for the good care that she had given her mother, and kept her on, living in the house, while it was going through the estate proceedings.

Then one day in Danville a psychiatrist was murdered. The police really didn't have any lead as to who might have done it, and they asked for the doctor's--I guess his partner--for the records of his patients. They wouldn't give them to the police; they said this was personal, confidential, physician's confidential information. So the police staked out the place to see who was coming and going from there, and started taking license plates numbers of all cars that came and went, and then tracing out those cars to see to whom they belonged. One of the cars that they picked up was registered at 40 Lincoln, where Mrs. Lane was living.

So the Piedmont police went to call on her, to try to find out about this car. It was not registered in her name, but it was registered at that address. During the course of the conversation the policeman got very suspicious that she was somewhat evasive. Somehow he managed to get her fingerprints on something. He went back to the police station and checked; he began to think that she might be Winnie Ruth Judd. He investigated it, and he got records from Arizona, and it turned out that, yes, it looked highly likely. Then the fingerprints confirmed it.

One day in late June of '69--it was over a weekend; we had gone up to Lake Tahoe; thank heavens we were gone. The police came in and arrested her and took her to jail. They held some extradition hearings and Melvin Belli defended her. But she was extradited to Arizona.

Chall: Why, had she escaped from prison?

Swent: She had been sentenced to be hung. Then that was commuted to life imprisonment in a mental institution, because the plea had been made that she was not in her right mind when these murders were committed. But she had escaped several times. The first few times she escaped she was found in a matter of a few days or a few weeks. But I think the seventh escape she was gone until she was arrested in Piedmont. That was seven or eight years after her escape.

Actually she was a very mild woman, an older woman at this time. I certainly had not recognized her. She had gained a lot of weight and was very matronly, and of course had a much different hairdo.

But I was so glad that I was away, because the press came around and questioned everybody in the neighborhood about her, of course, when she was arrested. Since we weren't there, we didn't get questioned. I would have looked very stupid in questions saying, "Yes, I used to know her forty years ago," not having recognized her.

But I looked at a picture I had from an old newspaper of 1932 when the murders were committed, and after looking at that picture and looking at her picture when she was arrested and knowing what she looked like now, why, I didn't blame myself for not having recognized her forty years later. But if I had known who she was, if it had finally dawned on me, it would have been a terrible problem as to what to do about it. I'm glad I never had to face that problem.

At any rate, Mrs. Nichols's daughter went to Arizona when she went back and had a hearing down there. She appeared before the

court and spoke of Mrs. Lane's good behavior and treatment that she had given, how grateful her mother had been and how grateful she was for her having taken care of her mother, and offered to employ her and keep her. If the court would award her the jurisdiction, she and her husband would be responsible for her in Danville. So the court decided that that was a satisfactory arrangement and released her into their custody.

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Later I think the daughter died. At any rate, by then I guess she figured she was free, and she moved to Stockton. One day, oh, about a year or so ago, she came by the house here and rang the bell. I went to the door--and I didn't know who she was, again. This was now another fifteen years later and I wasn't sure who she was. She was just a little old lady. She said, "You don't know who I am." I said, "Gee, no." She said, "I'm Winnie Ruth Judd." Then I did recognize her as Marian Lane.

So I invited her to come in, but she didn't want to come in. She had a niece out in the car and she said, "I'm just going by. I'm living with my niece up in Stockton and taking care of her house while she goes to college." But she said, "I just wanted to stop by and say hello." We had a nice little conversation and she gave me her address. I really intend to go up and call on her someday and find out more about her story. But she said she was under great duress while working as Mrs. Lane, and she said she wanted very much to be able to talk to me, but that she hadn't been able to. It's very interesting. She said the court had allowed her to continue using the name Marian Lane because her real name would atract too much attention.

Chall: Well, that's quite a story. Yes, that was a notorious case; I recall it. I had forgotten about the local side of it. That was exciting for a young boy at that time.[1]

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[1] An interview with Marian Lane is in process.

III EDUCATION

Chall: Today I wanted to talk about your education. Your parents sent you to a boarding school near San Jose when you were, what was it? Nine years old, did you say?

Swent: Oh, I think it was earlier than that. I think I was about seven. I'm not really sure.

Chall: It was about the time to start school.

Swent: Yes, it was first grade. The school was the Montezuma School in Los Gatos in California, just south of San Francisco a ways.

Chall: That's a rather young age. Did your mother ever discuss it with you, how she felt about sending such a young person off to school so far from home?

Swent: Well, I don't think they ever discussed it with me. I don't recall much of it. But they realized it was an experimental thing and that it might or might not work.

Chall: And it didn't.

Swent: It really didn't. I was very, very homesick, and I think I was almost a problem to the school. It was a boarding school, and we had sort of dormitories. And we had a--oh, not the headmistress, but a woman who was in charge of the dormitory in which I slept. And she would--at least the first few nights that we were there, she finally took me into bed with her because I was crying and unable to sleep. She was very nice, very comforting. But it just didn't really work out. I never took to it very well. I'm not sure how long I was there. I think it was the first term. My folks came back from Mexico for a vacation or a visit and they decided not to send me back to school. I'm not sure whether it was one term or one year. It seemed interminable at the time.

Mother as Teacher: Grades One through Eight

Chall: Yes. So then your mother decided that you would need to be taught at home.

Swent: Yes. Then my folks went into--I don't know where they learned about this; maybe just from advertisements. But they adopted the curriculum from a place called the Calvert School in Baltimore, Maryland. Their method of operation was to-- For a fee they would send out a full year's lessons, complete with all the materials needed: all the books, all the paper, all the pencils, all the erasers, everything. Even cut-out paper, colored paper, pictures, illustrations, everything--and the outlines of lessons and the instructions for the teacher or mother.

The entire course was designed exactly for the situation that my folks were in: American people living in foreign countries where they could not get educational facilities for their children. They put everything in, so that you didn't have to do anything to supplement it, except the mother or the teacher would have to read these lessons and do the planning. But they were very specific on how to present the class. It was only an hour and a half a day, but with individual teaching rather than being in the classroom with twenty to forty students, they said that an hour and a half was all that was needed to impart the materials, as long as it was a concentrated hour and a half.

They had a six-year course which would take you through all the material covered in the ordinary public school, grammar school of eight years. So this was the plan that my folks undertook, and my mother carried it out. She was the teacher, and it worked very well.

Chall: Were you her only pupil, or did you bring in somebody from the rest of the community?

Swent: No, I was the only pupil. Now, they did try me--I'm not quite sure when--for a while in the Mexican public school in Tayoltita. I went there for a short term of some sort. I remember it; I don't remember any problems with it. But I think they decided that I was learning more from the Calvert School than I was from the Mexican school, although I'd be learning in Spanish. But the language was no problem; I was speaking Spanish anyway.

Chall: Was it just an hour and a half with your mother? Did you then have some time for homework, or what? Do you recall?

Swent: As I remember it was just the hour and a half. I think later on as the years got higher that there were things that I had to write and that sort of thing, where I did those outside the hour and a half.

Chall: Then did you send the lessons back to Calvert to grade them?

Swent: No. It was not a correspondence school; just right there. My mother did a lot of correspondence school studying herself. She took a lot of stuff from University of California Extension School; that was for her own education. She did a lot of work in history and art. But no, this was not a correspondence school in any way.

Chall: Did she handle the algebra, the math as you got into-- Well, you didn't have that.

Swent: You didn't get into algebra in grammar school. So in 1929 we finished this, and they decided then that my brother, who was four years younger than I, was coming along, and he needed his education. For the last couple of years of my Calvert schooling, my mother had been teaching him, too. But he was at a different level, so she had to do him separately from me.

He required a lot of special attention in that he was hard of hearing. I should say is; he still is. As a result, his speech was greatly retarded, and it was a long time before they finally found out what the problem was with him. By then he had formed very bad tongue habits. It was a very difficult time. He had to be untaught, in essence, a lot of bad habits, and then taught how to speak. This was at first handled by a lady named Mrs. McKenzie in San Francisco, who was the one who detected what was wrong with him. She was a very patient lady, and she worked with him for a long time, and then taught mother how to go on with this. So she was doing that and also teaching him the lower years of the Calvert School.

Chall: How to read and write?

The Moses Brown School, Providence, Rhode Island, 1929-1933

Swent: Yes. She was just using the lessons that had been for me. This got a little too much, and Calvert School did not have a preparatory school level, so they decided to send me to Moses Brown School in Providence. Now how that came up is another story.

One of the geologists that San Luis Mining Company had was Hugh McKinstry. He had been recommended by Donald McLaughlin, who

was the consulting geologist for San Luis, and also for other Hearst, Haggin and Tevis mining companies, especially for the Homestake Mine in South Dakota. He used to come down in the summers and spend a few weeks. He recommended that the company have a full-time geologist to do the geological mapping. He would come down on his vacations in the summer and review the mapping and make his recommendations based on the mapping that this geologist would do. He wanted geologists, basically, who had been trained in his system of underground mapping. This was one of the great contributions that Dr. McLaughlin made to mining engineering, mining geology, was to develop a concept of detailed underground mapping to form a foundation for geological study.

So Hugh McKinstry was one of the early geologists that he sent down. He had gotten his Ph.D. at Harvard, where Dr. McLaughlin taught. Hugh McKinstry had been in Europe during World War I, driving ambulances. He had met another ambulance driver named Lester Thomas, who impressed him very much. Lester Thomas was a Quaker, and McKinstry thought he was a very fine individual.

After the war, Lester Thomas had gone into teaching and he became the headmaster of Moses Brown School in Providence. Hugh McKinstry said that any school that Thomas was the headmaster of must be a pretty good school. So he looked into it and it came up that it had a very good reputation. It served both as a day school and a boarding school. They had about seventy-five boarding students and a couple of hundred daytime students from Providence. The boarding students were from around the outlying areas where it was too far to commute.

So anyway, in 1929 my folks decided that they would send me there. We came out, as I said, in June of 1929 to San Francisco, and my mother and I spent the summer in San Francisco so we could get ready for this. My father came out, and in September we went East, to Providence. On the way we took a tour through Yellowstone Park. We took several days for that, and that was a marvelous trip.

Chall: Were you on a train?

Swent: Well, we took a train to West Yellowstone. We went from San Francisco to West Yellowstone. They had bus tours that went around the park and we stayed at different lodges. The first one was Old Faithful Lodge, and another one was Yellowstone Falls; there was a lodge there. The third one was at the hot springs, then back to West Yellowstone.

We took the train on back down, I suppose, to Cheyenne. Then went on East to Chicago and finally up to Providence by way of New

York. You had your choice; in those days you could take the train from Chicago to New York, then up to Providence or from Chicago to Boston and down to Providence.

The Yellowstone experience was wonderful. The first sight of Old Faithful going off--my dad was a photographer; he liked to do photography, and he decided right then and there that he needed a moving picture camera. So he went and bought one right there at Yellowstone, and started into the movie business. This was a great thing. He went into it and subsequently did a lot of movies. We've got a lot of movies of Tayoltita and that life down there, and of the subsequent building of the airfield. They're very good.

At any rate, we wound up finally in Providence. This was a very sad parting at the boarding school. My parents were there a day or two before they left; they looked the school over. We met Mr. Thomas and liked him very much. So they finally left me one afternoon; they were leaving town the next morning. They stayed down at the Providence Biltmore, and they decided they would go to a movie that evening. They went to see the Marx Brothers--I forget which one. I think it was Coconuts, which is, of course, very funny. Everybody was laughing, and they said they just couldn't laugh at all during the whole movie.

Chall: They felt terrible, too, about leaving you behind. Well, you were thirteen, a little older than you were at the earlier parting, but still, that's pretty young.

Swent: I was actually twelve, because my birthday is in November and this was September, so I was still twelve. But basically it worked out much better than the Montezuma experience.

Chall: Oh yes; of course, you were older.

Swent: I had a roommate, a fellow named Charles Conrad from a nearby town in Massachusetts. His parents were very nice to me over a period of time. They invited me up for Thanksgiving vacations. These short vacations were a problem, because the school closed down. Most of the other boarding students were located nearby, Massachusetts or Connecticut or something. They could go home for these short vacations, but they were a problem for me because of the long distance to Mexico.

The first year that I was there they arranged with a farmer--I think he was in southern Massachusetts. I don't remember his name or where--for me to stay at this farm for the Christmas period. This was very interesting in a way, and I got along fine there. [Chuckles] The thing I remember--they had a hired hand who had to get up very early in the morning, and he had the biggest alarm

clock I have ever seen. It was something that looked like one of these big fire alarms or burglar alarm bells. It would go off at four o'clock in the morning, and you could hear it all over the house. [Laughter] Apparently he slept very hard, and he had to have a real loud alarm clock. The farmer was fairly elderly, but he would take me out, walking through the fields and that sort of thing. It was kind of an interesting experience for a couple of weeks during the Christmas vacation.

In later years--let's see. The first Christmas was 1929. And the 1930 one--by then air transportation had developed in the country. No, that was the next year. [pauses to think] No, I took the train all the way--

Chall: Your grandparents lived on the West Coast.

Swent: Yes, my grandparents lived in Alameda. But that wasn't much closer than Tayoltita. So I think that 1930-31 I did take the train all the way from Providence down to Tucson, Arizona. I'd go from Providence to Boston, and, as I say, Dr. McLaughlin was teaching at Harvard in those days, and he was sort of our contact that I could use in Boston. Mrs. McLaughlin, generally, would take me and transfer me to the train to Chicago. At Chicago I would transfer to the train that Southern Pacific and Union Pacific-Rock Island ran down through New Mexico and over to Tucson, Arizona. Then at Tucson I would transfer to a train that went down to Nogales, Arizona. There was generally a through car that then crossed the border and went down the coast to Mazatlan or Dimas. I would normally get off at Dimas and then get a ride out by muleback or truck, for a ways--by then they had trucks on the first leg of the trail. Then I'd ride out from someplace like San Juan or San Ignacio to Tayoltita by muleback.

Chall: How long would that take?

Swent: By then that was down to a day and a half of muleback riding.

Chall: Well, I was wondering how long did it take you from Boston.

Swent: Oh, that was probably about a six to seven-day trip.

Chall: Half your vacation was gone already!

Swent: Yes. But vacations were longer then than they are now. It wasn't the time as much as the expense for this. So the first year I didn't go home; I went up to this farm. The second year I went back by train. Then in 1931 they had developed air transport and Tayoltita now had an airfield.

So I think this was my last trip. I rode the train from Providence to New York and to Columbus, Ohio. I got there at midnight, got off and stayed overnight at a hotel, and then very early the next morning took off on, I think it was one of the very early American Airlines runs. They flew me to El Paso, Texas in a trimotor Fokker. This would have been in December of '31. Then we changed over to the CAT line, which was the Mexican airline that Mr. Hull, Theodore Hull had started and was still running. And I flew down to Torreon in Mexico, and then over to Mazatlan. I stayed overnight in Mazatlan and then flew out to Tayoltita the next morning.

Chall: Still sounds like a long trip, like several days.

Swent: Well, that was, let's see--I wound up in El Paso at the end of the second day and in Mazatlan at the end of the third day, and in Tayoltita the morning of the fourth day.

Chall: You shaved a day. It took a long time.

Swent: Well, no. It shaved more than that, because the trip down to Dimas by train was about five days, and then I had a day and a half of muleback. So it saved about three days.

Chall: It must have been exciting to go down the airfield that you had watched being built.

Swent: I was one of the first people to do this. In fact, American Airlines wanted to take my picture and put it in the newspapers. I guess I was a little too rigid about it. I asked if they would give me a reduction on the ticket.

Chall: Oh, really? [Chuckles]

Swent: And they said no, so I refused to have my picture taken. [Laughter] So I didn't get photographed.

Chall: How was that school? You were there three years.

Swent: No, I was there four years. I was recounting the Christmases. I'm not sure what I did the fourth Christmas. I may have gone back down to Tayoltita by then. With air transport it was much easier.

I did well in school. I had no problems with languages or general subjects. I was well prepared. You know I had missed--I had only used six years to go through the elementary school. But I had no problems at all.

In fact, I had studied French in Tayoltita. My mother did not teach me French. The wife of one of the men working there--he was my dad's first assistant. His name was Carlton Cushman. His wife was actually of Russian extraction. She had lived in Paris for a number of years and spoke French very well. So she had offered to teach me French. So I had taken French from her for a couple of years before I left in 1929. She did a very good job. I used to enjoy the lessons with her. The French really wasn't any problem; it really is quite similar to Spanish.

So at Moses Brown I took French, and I got placed fairly high. Moses Brown used what they call the form system, which I guess is British. They had five forms, and I went into the second form. The fifth form was the equivalent to high school senior. But they placed me into third form French. Even that was no problem for me. Then the next year I took the fifth form French.

I had no problems with anything but algebra. I was a little bit puzzled by algebra. So the first summer that I went home, my dad tutored me in algebra, and explained to me how he had been tutored earlier in his youth by Steinmetz. Anyway, that solved all my algebra problems. He did a very good job on that, and when I went back for second-year algebra I had no problems.

I did have a little trouble, but it finally sunk through my head, what a complete sentence is. That was in the first year English. I kept drilling and drilling on that. I took two years of Latin, and that was no particular problem because of my Spanish and French background. In fact, in many ways I wished I had had more of it than that. They did offer more, but I didn't take it at the time. They had several years of Latin at the time, and I think they also taught a little Greek. But I didn't take any of that.

Chall: Did you have good teachers?

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Swent: Looking back on it, I think they were all excellent. At the time I had some different ratings. The weakest one was probably the Latin teacher, I think. I had an excellent English teacher. His name was Hanscum.

Chall: Were they mostly male teachers?

Swent: They were all male teachers. The last two years the English teacher was William Paxton, who was excellent. He did literature and poetry, and was just very, very good. I was not good at poetry, and I did poorly in it. But I probably did fairly well in composition and well in the Shakespearean things, plays and

literature. But poetry didn't seem to interest me. Paxton years later became acting headmaster in a period when Mr. Thomas had retired and the school didn't have a new permanent headmaster.

In fact, I visited there once years later when he was acting headmaster, and he was a tremendous help to me at that time. I was looking for a school for one of our daughters. He suggested that I look into the Moses Brown affiliate for girls. It was called Lincoln School. I phoned about it. It was six blocks away, and it had existed when I was going to school. But I had not paid much attention to it at the time.

But when we were looking for schools for my daughter, we had hired a consultant in Albuquerque, New Mexico to help us place her. She came up with a whole list of schools. I went out and visited some of them; I was on a business trip to the East Coast at the time, and I took some time to visit two or three of the schools that she had recommended the most. Then I went by Providence just to visit Moses Brown, and told Mr. Paxton what I was doing, and he said, "Well, you might take a look at Lincoln School. I'm not recommending it for your situation, but just take a look at it because it is a good girl's school." So I did, and I was so much impressed with it, how much better it was than the other schools that I had visited, even though they had the national reputations.

When I came home I recommended to Lee and Christine, who was the one we were looking for, that they take a look at it. They were going to go out and take Christine around to see the schools, and I highly recommended that they add Lincoln to their tour. When they got all through they came to the same opinion as I did, that it was far above the best, not only from the point of view of education, but from the facilities that they offered. The rooming facilities were so much better. The others were crowded, and they were very permissive. This was not crowded, and not permissive. The others all seemed messy; they were letting the students get away with poor habits. Anyway, we wound up sending her to Lincoln. She in turn, later, was very grateful to us. It was a good thing. She thanked us profusely for having sent her there.

Chall: She went there for four years?

Swent: It was three years.

At any rate, to get back to my experiences at Moses Brown---another one of the teachers that I thought very highly of was named Herman. I can't remember his first name, but he was red-haired and slightly balding; he had a very sarcastic method of speaking but was very good. I had him for both the second year of algebra and

geometry and trigonometry. I did very well in those subjects and liked him very much.

Another outstanding teacher was the history teacher, Everett Raines. He had been, I guess, a semi-pro baseball player. In addition to teaching history he also was an assistant coach to the baseball team. I liked him very much, both for his personality and the history courses; they were very good. I took American history and civics from him.

I took college entrance board examinations in both my junior and senior years--I don't remember now exactly, but in geometry I think I got 100, which is all you could get, and in the American history I got 92. And he said he was just so pleased with that.

When I went back the next fall, he said that was the highest grade that was given. He hadn't thought I'd do that well. He thought I would do well, but he didn't think I'd do that well. He was just very, very pleased with that one.

You know, at the time that they were teaching me, I thought these guys were all old men.

Chall: Yes, of course! [laughter]

Swent: When I visited there, twenty or twenty-five years later, some of them were still there. Paxton was still there; Raines had just retired; Herman was still there. It was very interesting visiting them all some years later.

Chall: Did you take part in any sports activities while you were there?

Swent: Yes, I went out a little bit for football my first year and played on a second-form team or something. I even broke a finger, and basically decided that I didn't have the right build for a football player, so, after the first year I didn't try it anymore. I went out for swimming, and eventually was on the swimming team and got a letter in swimming, although just barely. The distance that I entered at that time was two hundred yards. The problem with swimming was that the school swimming pool was not a standard size pool; it was a small pool, only twelve-and-a-half yards long, or half the standard size. The standard size at that time was twenty-five yards. I guess the standard today is fifty meters. I keep thinking that's the standard but that's the Olympic size. But anyway, I swam the two hundred yards.

Every once in a while they would get permission to use the Brown University pool. Moses Brown school was not far from Brown University. Both the university and Moses Brown were started by

the same family. The school was started by a man named Moses Brown. The Browns were a prominent Quaker family in the early Providence days.

At any rate, the university was just a few blocks away, and once in a while they would let us go down and swim and practice in the Brown University pool, which was a standard twenty-five-yard pool. It made a big, big difference, because you didn't get so many opportunities to shove off. You get a lot of velocity out of making the turns and shoving off. This is particularly true for a long, long distance like the two hundred yards. The number of turns that you make influences your time greatly. Our team was at a disadvantage when we went into a meet with another school, because we always swam in the standard-size pools but trained in the smaller swimming pool.

When the spring season came along I decided I didn't have much experience playing baseball, so I found out that they had a position of manager of the baseball team. You could try for that. The manager of the baseball team actually did the correspondence, setting up the schedule for the following year, and made arrangements for transportation when the team went to other schools, made arrangements for taking care of visiting teams, and being sure that we had enough balls and bats and all the equipment and that sort of thing. Of course, all this was done under the guidance of the coach anyway. They just told you what to do. But it was a good experience.

So I went out for that and eventually got to be the manager of the team in my senior year. So I learned a lot about baseball that way that still stands me in good stead. I later tried to play it and enjoyed playing it, but at the time I figured I wouldn't do very well if I tried out, because I didn't have the experience all the other kids had who had been playing it all their lives.

Chall: What about the influence of the Quaker church there?

Swent: Well, the school was under the charge of the New England Quaker meeting. Every day the routine was that you had a general assembly before classes started. The general assembly was for all the day students and the boarding students. The senior master, sometimes the headmaster, would give a Bible reading to open it maybe three to five minutes, reading from the Bible. It was the King James version always; at that time they didn't have the new versions that we now have. There would be general announcements of various kinds, and then the assembly would be dismissed and you would go to your classes.

At the beginning of every meal the senior master would ring the bell after everybody was seated and then they would have a moment of silence. It would be--I've forgotten; it seemed like an interminably long time at the time, but it was probably less than a minute. Then he would ring the bell again, and then you began your eating activities.

That was about all there was on a daily basis. On Sundays they had a service. They had a little place they called--it was a combination chapel and stage for plays and things. They generally had a service there. They had a man who came in, Alexander Purdy--he was not on the faculty--who gave the sermon. They had their own school hymn book.

Oh, I'm sorry--let's go back to the Bible reading at assembly hall. We did sing a hymn; we would generally sing a hymn from this hymn book, and they usually had someone play the piano. During the years I was there it was one of the students--his name was Carl Howland. He was a day student in my class, so he played at nearly every assembly for the four years I was there. I suppose that if they hadn't had a student who could do it they would have had a faculty person.

So they had hymns and they had the hymns also at the Sunday service, but they weren't particularly denominational hymns. They were mostly standard Protestant hymns. I still have the hymnal somewhere downstairs in the library.

Mr. Purdy later became a well-known figure in the Quaker world. But one Sunday a month he would not come, and we were asked to go out to a local church of our choice. They had a sign-up sheet, and you had to sign up for something. You could go to the Quaker meeting house if you wanted to; they had Quaker meetings. Or you could sign up to go to one of the other churches, and they would have one of the faculty assigned for each of these churches. You would go with a group, whoever signed. If there were six or seven of us signed up for the Congregational church, why, he would accompany those six or seven. So he knew who was supposed to go, and we were under control!

So I sort of took to shopping around, and trying to go to a different one each time there was an opportunity. I went to the Quaker meeting; I went to the Congregational Church, I went to the Episcopal Church. Oh, I went to quite a few. After the first year it became repetitive.

But probably the one that I went to the most was the Congregational. The Quaker meeting was very difficult for me to go to, and I think for others of my age. We were restless at that

point and the Quaker meeting is different from the others. The others have a little activity; you get up and you sing a hymn and you sit down, and you get up and you read this, and you get up and do that, and there's a little activity.

But in the Quaker meeting you just sat. The congregation never rose; there was no person leading the service or anything. The congregation just sat. The women sat on one set of benches facing the benches on which the men sat. Anyone could get up and speak that wanted to. Most of the people who spoke were older people. The congregation really was mostly older people. Then once in a while us kids would come down from school. But just sitting there for an hour--and sometimes you would go through the whole hour and nobody would speak! [laughter] That was just the longest hour that ever passed! So I didn't go there very often.

The first time I went to the Episcopal church, I had never been to one that had as elaborate a routine as this. And it involved kneeling. They had folding devices on the back of the pew in front of you. There was a thing that would pull down and this formed a cushion, and you could kneel on that. And I didn't know how to work these things. I got my foot tangled up in it, and when I tried to get up I tipped the whole thing over; I tipped the pew over of everybody who was sitting in front of me. It made a terrible noise. [chuckles]

In the summer of 1929 when we were in San Francisco we stayed at what was then called the Huntington Apartments, which is at 1000 California Street, at the corner of Taylor and California. It's still there; it's called the Huntington Hotel now. We were up on the eighth or ninth floor. We had stayed there sometimes before, and somewhere along the line someone had taught me how to make a box out of paper. It was all made out of one piece of paper, and you folded it all and you wound up with just a little opening at the top. I found that you could fill that with water and then you could lean out the window-- Some of the windows faced on California Street, and we were just off to the east side of the entrance to the apartment building. You could drop this paper box full of water from about the seventh or eighth floor, and it was a great explosion of water when it reached the sidewalk. I did that and we tried to hit people with these things, until they finally found out where they were coming from. The management complained to my folks about it, and I had to stop it.

But when I got to Moses Brown, why, this was another opportunity to try this. I was on the second floor there, and I

tried that a few times. But I got chastised and was assigned some demerits. So I quit that.

Chall: Was there much prank-playing with all those young boys?

Swent: Yes, there was some. And, of course, the school had its own pranks. The senior master was a marvelous old gentleman named Oliver James Barton Henderson--OJBH. Everything he signed he just signed OJBH. His nickname was Jit--I'm not sure how you spell that. Everybody just called him Jit. Not to his face though. To his face he was Mr. Henderson.

He was a marvelous person; he had a great sense of humor. He knew his kids. He presided over the assemblies and did all the routine work of running the school. He rang the bell at prayer and all that sort of thing. He liked to go to England for his summer vacations. Just a marvelous fellow. I visited with him a few times when I visited at the school, but he had retired by the time--in fact, I think he had died by the time I was looking for schools for Christine.

Chall: While you were in high school did you have an idea what you might want to be doing, aside from going to college? You were in a prep school. Did you know where you might be heading, what direction?

Swent: No, I didn't really. I had no idea what I might want to do, and actually it never entered my mind that I had to decide this. You know, I just didn't think about it. My dad did a very good job of giving me some mining background, if I wanted to go into mining. He never pushed me on mining. And in later years we did discuss this, but it wasn't until after I got out of Stanford, basically--I kind of drifted, because I knew something about mining and he had given me good background in it.

When I first went to Stanford I decided that I would study engineering. That's what I did. But even Stanford was not definitive in that respect. They had, in those days, what they called the lower division requirements. This meant that you had to take a certain number of courses and spend a certain amount of time in arts, history, and languages, before you began your major. The first two years you were in the lower division of school, the last two years were the upper division. You had to do all this work in the first two years. Really, it left little time for anything specialized like mathematics--well, you could do math, because some math was required of everybody. So you could take some math, but you couldn't get into specialized courses until your junior year. So, as a result, an engineering degree was a five-year situation. If you were majoring in engineering at the end of four years they

gave you an A.B. in engineering, and then you had to come back for graduate work to get the engineering degree.

But I'm very much in favor of this. It gives you a lot of outlook on the world that you wouldn't get, and you don't get, if you just go straight into engineering in college.

Chall: I notice that when you finished high school, you took a year off before you went to college--is that correct? And you went back to the mining camp?

Interval Between High School and College: A Year in the Old Mexican Mining Camp

Swent: Yes. When I finished Moses Brown I wasn't sure where I wanted to go to college. I was only sixteen years old. We figured that I didn't really have to go to college right away, and so I stayed out a year and went back to Tayoltita. Then I got a job. San Luis Mining Company was trying to revive an old mine 137 miles due north of Tayoltita at a place called Guanacevi, that was in the state of Durango.

It was an old mining camp. Access was a bit complex. Through the city of Durango there was a railroad line up to an outlying end of the line station called Tepehuanes. This was on the plateau, but in the very heavily forested part. Tepehuanes was really a lumber center. The reason for the railroad there was to take the lumber products back down to Durango.

Guanacevi was north of Tepehuanes, about a little over a day, maybe a hard day's muleback ride. Or horseback--up there horses were used a great deal, because this was no longer the really rough country of the Sierra Madres where Tayoltita is. In Tayoltita everybody used mules because they were much more sure-footed. They were absolutely required in this area. In Guanacevi we used horses a great deal. Anyway, Dad got me a job up there. At this time they were examining the mine and trying to decide whether they were going to open it up.

Chall: Silver and gold?

Swent: It was an old silver and gold mine that had been shut down during the revolutionary times. It had been operating, and then as a result of the revolutionary period from 1910 to 1917, almost all mining got stopped. So this was now 1933, and they were going through and sampling it and deciding what to do. The decision was

made while I was there that they would develop it. The first work that I was doing was as a helper to a geologist who was examining the properties.

Basic Mapping and Sampling

Chall: What would you have been doing as his helper?

Swent: His name was Rodgers Peale. I helped him with mapping. We had to do a lot of basic mapping. One of the things we did was what we called plane table work. Generally, this was just for doing the topography, getting the topography and drawing contour lines. The days of aerial photography hadn't developed yet. When my dad was teaching me algebra he also taught me how to run a transit and do surveying, so the plane table work was just a variation of surveying. I was able to do that.

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The plane table is a table that's set on a tripod. You put an instrument on top of it that slides around on the table and it has a ruler, straight-edge, as its base. On the plane table you put your map that you're developing and you put a pin in the point that you're set up over. You put one edge of the straight-edge on that. Then you move the instrument around until you spot the point that you're shooting at or trying to map. Then you set a rod on top of that point, and the rod is marked in feet, in tenths of a foot. The instrument in the telescope has horizontal cross hairs and a vertical cross hair. When you set the vertical cross hair on that rod, well, then you can draw a line on the straight-edge. That line leads from the point you're on through the point that you're looking at.

Then, for distance, to know how far away from the point that you're set up on it is, you read the difference in scale on this rod that you're looking at that's graduated in feet and tenths. That's called a stadia reading. There are formulas for converting that interval into distance. You can also measure the vertical angle that the instrument has, because you might be looking at a point that's below you or above you. The stadia gives you the direct line distance. Then you have to modify that by trigonometry from the straight line distance to the horizontal distance. Then you measure that distance on the map and mark it and that's your new point.

Your trigonometry also gives you an elevation difference so that you can also calculate the elevation of the new point relative to the point that you're on. You do this with a number of points. Then you start drawing contour lines based on those elevations.

Chall: It sounds as if it's a job that kept you busy for the year.

Swent: Well, it was interesting work. I was allowed to run the plane table and we developed a Mexican laborer who could do the rod work. I started out doing the rod work, and as soon as Peale decided I could do the instrument work, he turned that over to me. And I did do that and map the areas. We were just doing topography. He would go back later with the topography and fill in the surface geology, after we developed a topographic map.

That was my work for a long time. We would go underground. He was doing underground mapping, and he would decide where samples would be taken. We would mark the places for sampling to be done and then had a sampling crew that would come along and do the sampling after us.

There was one incident that I recall. All of these mines were old. They'd been mined back in the 1800s, I guess, and into the early 1900s. One was called the Capusaya Mine, which had a beautiful vein. It was a very continuous vein. It was in a small mountainside. There were some hills; it wasn't all flat there, but it wasn't anywhere near as abrupt a terrain as Tayoltita. But there was this one little mountain, and the vein had been very hard, so it had protected the erosion of the mountain. It went up maybe several hundred feet. There was a level down at stream level, and we went in that. It had been mined all the way up to the surface, so it came out at the top. Open stope, absolutely all open--well, there were a few places, a few old pieces of timber left. And it was fairly steep--something like sixty-five or so degrees.

We went in one morning and decided, well, we would climb up through this and look at it. In those days you used carbide lamps; they didn't have any electric lamps. We climbed up little by little. It was a narrow vein, maybe three or four feet wide. So, in most places, you could reach the upper wall which in mining parlance was called the hanging wall. The lower wall was the foot wall. You could reach from one to the other with your arms and legs. Rodge Peale showed me this technique of climbing these narrow stopes, of putting your back on the foot wall and your feet up on the hanging wall, and you could move your shoulders a little bit and just inch your way up if there was nothing to hold onto. If there were things to hold on to, you generally would climb with

your face toward the foot wall, but in some places you used this other technique.

Anyway, we climbed all the way through this thing. We had lunches with us wrapped up in gray paper that we carried. We got up to the top finally at about noontime. He did some mapping, made notes on the way up. It took us two or three hours to get up. When we got up, back to daylight and surface it was noontime, so we sat out on the surface and ate our lunches, sandwiches. By then the sun had come around and was shining almost directly down on us, on the stope. We could see it very clearly, what we had climbed up. As we came up it was all in the dark and all we could see was as far as the carbide lamps would cast light, which was maybe just a few feet at a time. We never felt that we were in any great danger.

But then when we could see down it in the daylight, with the sun shining right down on it, it looked so bad and dangerous and steep that we decided we wouldn't go back down. We went down by surface. We had intended to climb back down, but we gave it up and walked around. And Rodge had lots of experience, so when Rodge got scared, it was something to worry about.

Living Conditions in Guanacevi

Chall: Did you find all this a good adventure?

Swent: Oh yes, it was all very interesting. We lived under what most Americans consider fairly primitive conditions. We lived in this little town of Guanacevi in one of the better old buildings there. It was an adobe building, all one level, very long. There was a river that ran through there, the Guanacevi River. It was much smaller than the Piaxtla River in Tayoltita, but it ran all year round. It had formed a sort of cliff there, and we were up on the cliff, maybe one hundred feet above the riverbed. This building had been built into the cliffside. On one side you had the view down to the river and on the other side of the building was a street. The ground was level to the backside of the building where the entrance was. We had rooms. There was a big living room and on the other side there was a dining room and a kitchen. These were all just strung out in a row, and then there were lodging rooms. There was no running water. For washing and that sort of thing we had pitchers of water--they were brought to the room--and wash basins.

Chall: From where? Did you have a well?

Swent: Well, no, it came from the river.

Chall: So somebody had to go trekking down one hundred feet?

Swent: Well, yes. There was a path and all that. It was river water. For showers or bathing we had Don Pancho Bastidas's arrangement of a big tub up on top of a room. People would carry hot water up after heating it on a fire, and dump it in that, and then you bathed underneath. We had a Chinese cook and he would prepare these lunches for us to take and the other meals.

Chall: There was a little town there, though.

Swent: Oh yes, there was a town. The town had survived with a small population, just trading with each other, because there really was no other real industry there. So they were very anxious to see the mine reopened.

Chall: Did you reopen them?

Swent: They eventually reopened them, yes. And I went back to work there during another period. I think that was a summer job when I was at Stanford. That was the next year.

Chall: Why did you decide to go to Stanford?

Swent: Well, when I was at Moses Brown and taking college entrance examinations, you were supposed to specify where you wanted the results sent. That was one of the colleges that I had chosen. I had listed a number--I forget even which they were--but as time went on, Stanford seemed attractive and they were closer than some of the eastern colleges and that sort of thing. I wasn't particularly enamored of the East Coast after four years out there. Stanford sounded great, so I eventually applied and was accepted. When the results were sent to Stanford, I hadn't applied. But I did apply when I was at Guanacevi and was accepted.

One other thing about the life at Guanacevi, one little incident: We didn't have electricity either. They used great big Coleman lamps with mantles on them, and they did very well. They were a good working light. Mrs. Peale was living there also at the time. She was very small, a very short woman. Her name was Hattie, and everybody called her Hattie. [Begins to chuckle]

We did have air service from Tayoltita. It was one of the things that was possible; it was easy to build a field here. They would bring things up from Tayoltita by air. The airstrip was just two or three miles out of town, and you could truck them into town.

They did have trucks there, local; there was no truck road to Tepehuanes. Things could also be brought in by muleback and horseback.

One of the things that they brought over while we were there was a radio. In Tayoltita there was no radio reception for anything but entertainment, although about that time we did have an amateur radio ham operator. His name was Al Hintze, and he started amateur radio work out of Tayoltita at nights. Night was the only time it would work.

Anyway, they sent a radio set up from Tayoltita to Guanacevi for the staff. It was a great big thing in a cabinet. And it had been crated for its air transport. We were going to put it in this sort of living common room that we had. The day that it arrived Rodge Peale and I were doing office work, making maps. Mrs. Peale wanted to uncrate this thing, so Rodge sent me up to uncrate it. (The offices were part of these rooms there; it was all together.) He sent me over to this living room to help her uncrate it.

The thing had been very well packed and everything, because they didn't want the radio damaged. While I was uncrating it, Hattie Peale was sitting around watching me do this. And a great big cockroach ran out of this crate. It headed right for Hattie Peale's foot. She started jumping around and it jumped on her foot and ran right up her leg. She just did an absolutely wild dance! [laughter] It must have scared that cockroach near to death. It was quite a scene.

Chall: I guess you got used to cockroaches, but not on your body.

Swent: No. And the Peales had lived in Peru; they were old hands at mining camp life.

Chall: Was she the only woman up there with this crew?

Swent: Yes, she was the only one. Oh, they had some maids, but she was the only white woman there, the only foreigner.

Chall: So how many people were there? This house that you were living in served the people who were checking out the mine? That was the reason for your being there?

Swent: Well, there was sort of a manager. His name was Spellmeyer; everybody called him Spell. He was a short fellow, fairly bald, kind of wrinkled. He had been a sergeant in the army in World War I and had quite a husky voice. He was a mining engineer. There was Rodge Peale, with whom I worked. Then later, I think in a year, we had a man named Theodore Dickel. He was an American, but

he had married a Mexican woman and she came up and lived there. So we had Mrs. Dickel also--not all the time; this was later. He was there to begin doing design work for the construction of the mill, a railroad to haul the ore from the mine down to the mill. We had a Chinese cook and a maid. The maids turned over all the time.

Chall: Usually from the little city?

Swent: Yes. The Chinese cook had been imported from somewhere; I'm not sure where. They're ubiquitous in Mexico. I don't think of anybody else who was living there at the time. It was very small to begin with.

Chall: Just a small group?

Swent: Yes.

Chall: Were you there the whole year or a good part of it?

Swent: Yes. I think I went back to Tayoltita for the Christmas period, because they always had a big celebration there and the transport was easy. It was just three-quarters of an hour flight with the plane.

I did a lot of horseback riding on weekends. I had never ridden horses much before, so we used to do that on weekends. We each had a horse assigned to us. We used to use the horses during the week, too, to get to and from the mine, find different mine places.

Actually, this was a collection of two or three mines. It wasn't just one mine. It was an old Hearst, Haggin and Tevis property that had been owned by the Hearst, Haggin and Tevis interests and had been, as I say, shut down during the revolutionary days.

There was one fellow there--I can't remember his last name; Raul Madero--who came from a very well-educated family in Mexico City. I guess he had been kind of wild, and he had been sent there to look after some family interests. He and I would get together during the weekends. We were about the same age, and we would do horseback riding together and play games, card games and chess. And we went down around the town and did some drinking.

There wasn't much to drink. There was a lot of stuff called Sotol, which was I think just the first distillation product of sugar cane. It was terribly high in alcohol, generally sold in old beer bottles--just a local product. One little beer bottle of this would cost, I think, fifty centavos (which at that time was about

twenty-five cents of the U.S. dollars; the exchange rate at that time was two to one). That would put two guys out cold.

Usually the fellows would buy a bottle together and take nips out of it and run around the town hollering and shouting, and eventually wind up just laid out in the streets, literally laid out in the streets. You could walk downtown and find these guys laid out. It was very potent stuff. We didn't mess with that stuff. It wasn't very good tasting either--I tried it--but it was just terrible. Actually, any good liquor was almost non-existent. It was too expensive and the town didn't stock it. Once in a while somebody would bring in a bottle of their own. That was a great occasion.

So it was a fairly dull life. The most interesting part of it was the work itself. I did enjoy getting out and riding around the countryside by horseback and visiting little neighboring settlements and towns. There was another town that was an hour or two away called San Pedro, and there were more mines up there shut down. I went up there a few times. This was considerably higher than Tayoltita and was around six thousand feet in elevation. So the winter was much cooler than it was in Tayoltita. We didn't get snow, but it was fairly cold. You had to be well dressed to go out in the wintertime.

People were very nice. There were a couple of fairly high-level families there. One very top-notch person was the doctor. His name was Dr. Espana. I never did know his first name. He served as our doctor. He was already there; he wasn't somebody that the company had flown in. He was already in the community, and so the company retained him as the company doctor to take care of us when we had our colds; and that's about all any of us got there.

There was another family, the Sanchezes, that had two or three daughters and a son. One daughter was Leonore, another was Rosaura. They were well educated, of Spanish descent, with no Indian blood. They were on the white side as Mexicans go--the father and the mother, I think when I was there. Unfortunately, the mother died. The girls had to go into mourning, which really spoiled it, because they were good-looking girls.

Chall: It spoiled your good time.

Swent: No, they were older than Raul and I were. But we used to go see them on our breaks. That was about all there was to do in town. But they were good company. Martin Sanchez was their younger brother, whom I met a little bit there, and he eventually went to work for the company. I'm still in touch with him. He's on the

West Coast, running a limestone operation for a cement company right now.

Anyway, it was, as I say, a rather bleak existence there.

Stanford University, 1934-1938

Chall: So you did decide to go to Stanford.

Swent: Yes. Then I came up to Stanford. I came out in May, I think, of 1934. I came up to San Francisco. This time we stayed in an apartment at the Brockelbank, which is at Sacramento and Mason, just across the street from the Fairmont Hotel. A beautiful view. I think it's 1000; it might be 1100.

Chall: It doesn't matter.

Swent: That was the year, I think, when they had the general strike in San Francisco.

Chall: Oh, I think so; you're right.

Swent: We were there for that strike. It was a lonesome town that day. I remember Dad was there at the time, and we walked around and looked around. Nothing, nothing; absolutely dead town. I wasn't really up on the issues of the day or what was causing it or anything. We were just newly-arrived and didn't have the background. But I do remember the strike.

After that was over things settled down. My mother arranged for me to get some music appreciation lessons. I took that and a few piano lessons. I thought I didn't have any musical background, which was correct. That went on during the summer. One of my mother's acquaintances--I think she was an old school girl acquaintance, Mrs. Briggs--she married a doctor, Leroy Briggs. She was a very active woman.

She had an acquaintance named Carol Green Wilson, of the same generation. Carol Green Wilson had done a lot of work for Stanford and was an author, writer, had written articles for publication in Stanford magazines and things. She had written some articles about Stanford. She frequently would go down to Stanford from San Francisco on various things. She invited me to go along with her one day. It turns out that she was very friendly with the Herbert Hoovers. Herbert Hoover had retired from the presidency and was living in a house on the campus. On the day when she invited me to

go with her, and she went to visit Mrs. Hoover, Lou Henry Hoover. She took me and somebody else along--I forget who else was with me. It might have been her brother.

Anyway, we were in the Hoovers' house and she was chatting with Mrs. Hoover and they took us around the house, we saw the whole thing, the gardens and the interior. In the process of going on this tour, why, Herbert Hoover came in. So we were introduced to him. They told him I was going to go to Stanford that fall, so he kidded around with me a little bit. He said he just didn't understand how students could study and listen to the radio at the same time. He was very genial.

[Date of Interview: July 17, 1987] ##

That's a map of Europe. I told you about President Hoover, didn't I?

Chall: Yes. So you elected to go to Stanford. As I recall, you told me that your first two years were spent, because it was required, in a sort of liberal arts program, in humanities. At the end of that time, is that when you decided to go into mining engineering?

Swent: Well, I'm not sure at what point I made a real final decision. I guess the final decision was when I started in taking engineering courses. But there really hadn't been much doubt that I was going to take engineering, at least not much doubt in my mind, that that's what I would take when I got through with the lower division requirements. But I'm a firm believer in the value of the lower division requirements, and very glad that Stanford had that rule. They later dropped it, and now I think they've reinstated it again.

Probably the highlight of my first two years was my history course. I enrolled in my sophomore year in a European history course. After attending a lecture or two and then getting into sections where we had section leaders (whom we talked with and asked questions of and they asked us questions and gave us little quizzes), someone, I'm not sure who, selected me as a candidate for independent study in the course, asked if I wanted to do independent study. I thought that was a good thing to do so I accepted that. From then on I attended the lectures but did outside reading on my own based on the guidance that the section leader gave me.

Chall: What was the field of your study?

Swent: Well, it was European--it wasn't any particular thing, it was just perhaps a little more intense study of the European history from about 1500 up to World War I.

Chall: That's quite a bit.

Swent: Yes, it was several hundred years of history there.

Chall: All of Europe?

Swent: It was mostly European history, yes. The independent study leader that I had was a fellow named Wallace Sterling, who later became president of Stanford University and became very well known. He was an excellent instructor; I enjoyed him very, very much, and enjoyed the course a great deal. At the end of the year they gave me an oral examination in front of--there were several faculty members who sat around to give this oral examination. There was one question. The question was, "Do men make history or does history make men?"

Chall: What a question! Well, you had several hundred years to think about that.

Swent: Well, several hundred years from which to take my examples. Then it was a question of not only answering the question as to which way it went, but also supporting the decision that I made. In retrospect, after thinking about it for many years, I think they didn't really care which way I went, it was just a good question for making you think and review the history of the period in question.

Chall: Did you come out with a conclusion one way or the other?

Swent: Oh yes, I had to make one, one way or another. I can't even remember now which my conclusion was.

Chall: What would your conclusion be today with a little more time to ponder the question?

Swent: I think it works both ways. I think in some cases men make history, and I think in other cases history makes men. You can find support for either point of view. At any rate, that was probably the highlight of the first two years, that course with Wallace Sterling.

Now let me go back a little way. I joined the Theta Delta Chi fraternity on the campus. It's a national fraternity. At that time I think they had twenty-eight chapters around the country. In my junior and senior year, I think it was, I played softball on the

fraternity house intramural team. We played other fraternities and various faculty groups. Our schedule one year called for playing the history department, and we thought that was going to be a soft touch. These history people probably didn't know much about baseball.

When we got down to play this particular game, lo and behold, who should be the pitcher for the history group but Wallace Sterling. He was a great big man anyway, a very large fellow. I hadn't realized this before, but it turned out that he had played semi-pro baseball in Canada before coming down to Stanford. I never realized anybody could throw a softball as hard as he could throw it. We didn't get any hits at all! [Chuckles] It was a real disaster.

Chall: He had many talents.

Swent: He had lots of talents besides being an educator.

Chall: Did you live in the Theta house?

Swent: It was called the Theta Delt house. Theta is a woman's sorority. Yes. The freshman year we were required to live in the freshman dormitory, Encina Hall. All freshmen had to live there. Then in your sophomore year if you had joined a fraternity you were allowed to move into the fraternity house. If you had not there were other rooming dormitories where you could go. So I moved in and spent the last three years in the Theta Delta Chi fraternity house.

Chall: Did you enjoy the fraternity life?

Swent: Oh yes, it was enjoyable. We had a big dining room and of course we all ate together for lunch and dinner; we had breakfast on our own, as we got up. They had a regular cook there. Then we had a dormitory upstairs, a sleeping porch with double-deck beds. Most of us slept there. A few had beds in their rooms. At one time I rigged up a bed in my room.

I think it was my senior year I had a rather interesting experience. I had a radio in my room which I would turn on and then go to bed. I had rigged up a string to the bed so I could turn it off. But sometimes I'd go to sleep and it would be on, and I would wake up and it was still on. The bed was located in such a manner that when they opened the door to my room, the head of the bed was behind the door, so I couldn't see who was coming in, if somebody opened it while I was in bed. On the other hand, they couldn't see that I was in bed, either.

One night I woke up and I sensed that the door was opening. I thought maybe somebody was coming in to turn off my radio, that I had left it on. But I realized that I had turned it off, so I mumbled something about, well, I've already turned it off, and the door stopped moving. Nothing happened for a few moments. I got wide awake by then and decided that this was unusual, there's something wrong here. So I got up and checked around the house. I woke another person or two up, but we couldn't find anybody. Apparently there had been a thief in the house. He had tried to come into my room, because most of the people were out on the sleeping porch. But at this moment I was sleeping in the room. So when he heard my voice he apparently just stopped and then left.

Anyway, he was apprehended a few days later in some other house. There had been a series of robberies of that nature going around. I didn't realize at the moment, when I first woke up, what was going on. If I had, we might have been able to catch him sooner.

Then in my junior year I went into some of the engineering courses, the mining and geology courses. For the last couple of years I took mostly technical subjects. I did take some mathematics; basic math like analytical geometry in the lower division requirements. Then it went into calculus and physics, chemistry--well, no, the chemistry I took was a lower division requirement. Then general geology, some mineralogy, a course from a very well-known professor named Tolman on ores, and a course in metallurgy and fire assaying. It was taught by a fellow named Orson Cutler Shepherd. I knew him; he had formerly worked for San Luis Mining Company for three years in Tayoltita as the assayer there when I was a boy. Then I took ferrous metallurgy and a number of other technical courses.

Chall: Was Stanford considered to have a good mining engineering department?

Swent: Yes. It had been run for a good many years by Theodore Jesse Hoover, who was Herbert Hoover's brother. Herbert Hoover, as you recall, was a mining engineer. He made his fortune and reputation first as a mining engineer before he got into administrative work and politics. Jesse Hoover was also a mining engineer. He had run the Stanford mining engineering department for many years. He had retired just the year before I went there. I don't even remember now who had taken his place. But it was at that time a good school. Mining was still considered an important subject. I think it's declined now and has been merged into something called the earth sciences curriculum.

In my senior year I was elected to the honorary engineering scholastic fraternity called Tau Beta Pi. For activities I went out for fencing and was on the fencing team and earned my letter in fencing. I also went out for the Stanford Daily and decided I would go into the business end of it.

The first year I was what they called a tryoutee. Then in two years I got to be an advertising manager and had this territory because I had a car. My folks had bought me a 1934 Ford convertible, one of the first V-8s, with a rumble seat. I had that available, so they assigned me to the San Francisco area. The manager had divided the advertising field up into several fields. There were two fields in Palo Alto and local, and then the San Francisco area. We used to get advertising from the big department stores.

So I worked out as an assistant advertising manager one year for San Francisco. The fellow who was the advertising manager for San Francisco was Bill Moore, a member of the same fraternity house that I was in. He sort of took me under his wing and showed me the ropes. The next year I took that over from him. In my senior year I was selected to be the business manager of the Daily. That job actually paid a salary. I think it was seventy-five dollars a month.

Chall: In those days that was a pretty good salary.

Swent: Yes. And I saved most of that because that was on top of any allowance that I was getting from my folks.

I did forget, one of the highlights of the freshman year was a custom that Herbert Hoover started there. It was a personal thing. He would invite the freshman class up in groups of about fifty or sixty at a time. The freshman class consisted of somewhere on the order of six or seven hundred students. He would invite a group up to his house and give a little talk and then open things up for discussion and questions. The only thing was he barred any political questions. He wouldn't field any political questions. But other than that--these were marvelous talks. I managed to get in on a couple of them, although technically I should only have gotten in on one. But I was so intrigued with him that I managed to get in on the second one, and I enjoyed it just as much as the first time.

Chall: Do you recall when you were there what were the discussions?

Swent: Well, I can't remember the specific subjects, but I know that usually they had something to do with the current world problems and his views on them. He tried to be very factual, and he was

excellent. Really, I got a great deal of respect for him out of all this. He was a very, very capable man. Much more sincere and warmhearted in personal contacts than he seemed to be in his political appearances from what I saw in the movies of the time.

Chall: When you were going through your classes, you had had quite a bit of experience with mining. Did that give you a little more understanding? Were you a bit ahead of some of your classmates in terms of your practical knowledge of mining?

Swent: It helped a little bit, but quite a few others also had mining in their background. There really weren't very many people who were taking mining engineering as such. There probably weren't more than a half a dozen. I only remember one at the moment who was a year or two ahead of me, a fellow named Tom Young. He was also a fraternity brother. He came back and did his graduate work there. But there were really very few who went on and got the mining engineering degree. There were a lot of them who took the courses to fill in requirements and just to fill in their educational background, but they didn't take all the courses. They would just take selected ones. They would take the mineralogy, perhaps, or they would take the elements of mining course, or something of that nature.

The Bicycle Trip Through Europe, 1938

Chall: When you graduated, then, with the B.A., instead of going on to graduate school you spent a year in Durango? No, you took a bicycle trip to Europe.

Swent: Yes.

Chall: That was almost a year?

Swent: No, the trip was about six months. There were four of us who went on the trip: a fellow named Phil Klauber, who was an engineering student at Stanford. I think technically he graduated in 1937, but he was back doing graduate work in 1938, which was when I graduated. He and I had known each other. We took some courses together and we'd done some lab work together. We had a number of other friends in common. He was from San Diego, and he had a friend from San Diego named Vernon Gustafson, who had not gone to college, but was just very gung-ho for trying this bicycle trip.

There was a fellow named Harry Peterson, who was also a fraternity brother of mine but had graduated several years earlier.

He was coming back frequently, visiting. He lived in Hayward, but he had a girlfriend who lived nearby, so he would come down and sometimes spend the night, find a bed in the house that somebody wasn't using and stay at the fraternity house after he had had a date with his girlfriend.

At any rate, he heard me talking about this bicycle trip and he got interested in it. So we finally arranged for him to go. There were the four of us. I was business manager of the Stanford Daily and technically the fiscal year ended on June 30. I had to stay and be sure that everything was properly tied up at the end of the fiscal year. So we decided we would leave on July 1 for New York, and we decided to go by Greyhound bus.

Now Klauber started from San Diego along with Gustafson, and I was up in the Bay Area, in San Francisco. Peterson was from Hayward, but he had to go back to New York on other things anyway, so he went earlier. The other three of us started out on July 1. My folks were going up to Lake Tahoe, so they drove me up to Truckee. I took the bus from Truckee on to Salt Lake City, the first destination. Klauber and Gustafson met me there. They took a bus that came up from Los Angeles to Salt Lake City and we met, coordinated our schedules, and then went on, the three of us together, to Chicago and then finally to New York.

I tell you, we were some tired cookies by the time we got to New York. We went straight through; we didn't stop over or anything. I think we had a ship that sailed on the sixth or seventh of July from New York for Scotland. We took third class passage on the ship and sailed from New York to Glasgow, Scotland. We had a fine time. There were lots of college kids on board, lots of people our age from all over the country. Most of them were traveling third class, and we did a lot of pranks and had a lot of fun.

Scotland, England, France, and Northern Europe

Swent: We had joined the American Youth Hostel Association, so we had American Youth Hostel membership cards. That entitled us to stay in youth hostels in Europe which were highly organized. So we went to a youth hostel first thing in Glasgow. We docked, I think, late one afternoon, and the next morning we went shopping for bicycles right away. All of us bought the same bike so that we could not have spare parts problems. They were English bikes--I forget the name now, what make they were, but they were three-speed bicycles.

After we bought them, that afternoon, we started out for Loch Lomond in Scotland. This was our first attempt. It was about thirty miles north of Glasgow. We thought that would be a good amount to start with, that we shouldn't try any more than that, and it was plenty. We were really dog-tired and stiff that night, terribly stiff. Of course, it rained. We fell in with a number of different people that were cycling up there. One of them that sort of stuck to us was a Britisher. At four o'clock in the afternoon it was raining but he insisted he was stopping. He stopped and lit a little fire and made his tea and shared it with us. Then we went on, stayed in a youth hostel in Loch Lomond.

Then we went back to Glasgow and over to Edinburgh. We got a little better conditioning on the biking. From Edinburgh I think we took a train down to York. There was a system where you could put your bicycles on the baggage car, ride in the passenger car, and come back and claim your bikes when you got to your destination. This worked very well. When we found out how to do it we did that a number of times, not only in England but on the Continent, when there were long distances and we didn't want to spend all the time just cycling.

Then we worked our way down to London, and stayed in the youth hostel there. We stayed in youth hostels everywhere we could, actually. There were youth hostels in almost all the cities. When we got to London, the youth hostel was of course besieged by young Americans, and people from the continent, too. So they were limiting people to a three-day stay; you couldn't stay longer than three days in the London youth hostel. But after we did our three days there and did our sightseeing in London, we still wanted to spend another day or two there.

So on the fourth day, after the third night, the four of us each went our way. Our assignment was, each one of us was to try to find a cheap place to stay, and we would assemble in the afternoon and decide which one of these places we would use. I won the prize; I located a place called the Bruce House, where they would take you for a shilling a night. That's about twenty-five cents, which was about the same as the youth hostels charged. This sounded very good. I hadn't been inside, but I had gone to the house. It was a great big multi-story brick building in downtown London. At any rate, we decided that that was the best deal of all the ones that we'd spotted, so we went there to turn in.

By the time we decided that this was what we were going to do, it was really too late to change our minds and go look for anything else. When we started going in we noticed the assortment of characters that were assembled--it was a very chilling display of dregs of people. And it turned out that the Bruce House is the

London county tramp house, where they give cheap boarding to the London tramps. (Today's "homeless".) And all that the rooming was was a huge floor divided up into cubicles with partitions that came down to about a foot and a half from the floor, and not all the way to the ceiling. But each one had a little door and a bed in it and that's all, and a towel and some soap and the common washroom. It was clean enough.

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Chall: I assume that wherever you were you always took time to see the so-called sights, the historical sights and so forth.

Swent: Yes. Well, that's all we did, really, was just try to do that. I had never been to Europe before.

Chall: Had they?

Swent: No, none of us had been to Europe before.

Chall: And you had your great background in European history, which certainly would have added something to your trip.

Swent: Yes, that was a great help. Then we biked on down from London to Folkestone, which is just south of Dover, and took a channel ferry across to Boulogne the same day. Then we got started from Boulogne after lunch towards Paris.

Chall: Did your French that you had studied at one time help you?

Swent: Yes, the French was a tremendous help. That was more help than Spanish, actually. I found that Spanish wasn't much help because we didn't go to Spain on the trip, and outside of Spain nobody spoke Spanish. But the French was very helpful.

Chall: As you were going through England, France--and I presume you went to Germany, but we'll find that out--did you find at that time, this is mid-1938, that people were concerned about the possibility of war, or what was going on in Germany and Spain at the time?

Swent: Yes. Well, the Spanish Civil War had been going on for quite a while. That was about over by then, but that was one of the reasons we hadn't put Spain on the itinerary, because of the fighting down there. We got into some serious problems, which I'll come to, as a result of the situation in Europe. It did have some effect on our trip. All of this was tremendous with the background in European history, and also it was just a tremendous educational experience for us. The entire trip was a tremendous event in my life. It was one of the best things I've ever done.

When we got to Boulogne, as I say, we set out on the bicycles in the afternoon--well, it was probably late morning--and we started out towards Paris. Then it came time to have lunch, so we stopped at some little village in the suburbs or outskirts of Boulogne and found a place that we thought we could afford.

We were trying to limit our expenses to five dollars a day. We had spent the equivalent of two-and-a-half dollars a day in capital expenses on the bicycles. [chuckles] So we were trying really to get by for two-and-a-half dollars a day cash, which we did manage most of the time.

We found this little restaurant in a village--I don't remember the name of the village--on the outskirts of Boulogne, and went in and had lunch. This was our first experience with a continental, particularly French, meal. The choice was a fixed menu, or you could order a la carte. But the a la carte was just way too expensive, so for the cheapie we would order from the fixed menu. That included a little carafe of white wine for each of us. This was fine, and we downed it all, and then went on our way biking again. The wine really did it. About an hour after we started out, we were out in the countryside and pretty soon one of them says, "Oh, I'm tired. I think I'll stop and take a snooze." Pretty soon all of us were lying out under a tree sound asleep! [laughter] Sleeping off the effects of the carafe of wine.

So we lost about an hour there, but we continued. We made it to a town called Abbeville that evening. We stayed there our first night, and again, we exhibited our ignorance of European customs. We checked in around, oh, late in the afternoon, five-thirty or six o'clock.

Chall: Is that a requirement? In order to get your hostel, do you have to be in at a certain time?

Swent: Generally speaking, yes. If you didn't get in, say, by late afternoon, you might not get a space. You could come in anytime up until evening if there was a space. The big problem was, with all the tourists that were in there, you had to get there early enough to get a space. But we didn't stay in a youth hostel in Abbeville; apparently there wasn't one there. So we stayed in a little inn of sorts. The price of the night included dinner and then breakfast the next morning. We checked in around five-thirty or six o'clock, and as soon as we got into our room--we didn't have much in the way of baggage, because all we had was what we could carry on a bike. We just had these two bike bags on the back of each bike, and a little roll.

At any rate, we washed up and decided, well, we would go down for dinner. Of course, we ran into the business of--in France they don't even begin to eat until about eight-thirty or nine o'clock. But the dining room was technically open. We were the only ones there, but they served us. When the meal was over they brought a big plate with an assortment of large wedges of cheese on it. There were about four or five different kinds of cheese. They put this on the table for the four of us. We started eating away, and before long we finished off the cheese. Of course by now it was getting later in the evening, and a few other people were coming in to eat. Pretty soon the waitress came by to get the plate of cheese and present it to another table, and she was aghast when she found out that we had eaten all the cheese! [laughter]

Chall: Why not? [laughter] You were probably still hungry. Was there no fruit as well, or just cheese?

Swent: I don't remember that we had any fruit.

Chall: Oh, that's wonderful. Well, young Americans--

Swent: So we ate their full quota of cheese for the evening. I think those wedges were supposed to last them for the evening. We were supposed to take a little slice per person.

The next day we went on and we made it to Paris that day. We went through Amiens and stopped and saw the cathedral and then went on and got into Paris. We couldn't get in a youth hostel, but we got into something called the Auberge de Jeunesse in Paris, which was quite cheap. This was a great big large brick building, many stories, and hundreds of people staying there. You had a ticket that you used for dinner, and the price included dinner and breakfast again.

Breakfast was on a recognition system. You went down and there was just a great big huge bowl of cafe au lait and some rolls. You went through and they sort of recognized you. So, in order to save money on lunch, we took to going through the breakfast line twice. We would go back up to our rooms and change our shirt, put another shirt on, and then go down and go through again. There were so many, we figured they wouldn't recognize us. They didn't, so we got the extra breakfast, and that generally tided us over lunch, and we could skimp on lunch.

Chall: Really? Because that's only a couple of rolls apiece.

Swent: Yes, but that was a huge bowl of coffee, too, and milk. At any rate, we had a good time in Paris. Then after several days we set out bicycling again, and bicycled out to Luxembourg. We had an

interesting time in Luxembourg. Then we went on out into Germany and down the Moselle River. We rode down the Moselle River to the Rhine.

There we had a real adventure. Well, I should say that Peterson at that point was engaged to get married in September. Basically his heart wasn't too much in the trip. We had sort of laid out an itinerary that we wanted to do, and he didn't want to follow that because it was getting him back too late. So he decided he would take some short cuts. He decided he would go from Paris up to Denmark, because he had some Danish relatives to visit. So he went up to Denmark, and he wasn't with us when we went out through Luxembourg into Germany. There were just the three of us.

When we were cycling on these roads, of course, we would get separated during the day, during any given cycling period. So each time we would set out we would decide on a meeting place. Apparently on this there was some misunderstanding. As we came down near the Rhine River there was a choice of two highways, one of which went to the left and cut off some distance towards the Rhine River, and the other one which hit the Rhine River further upstream. It was Phil Klauber's and my understanding that we would take the upper one and go to the right hand road and go to the higher place on the Rhine before we started going down the Rhine. Verne Gustafson took the other turn. So when we assembled on the Rhine there at the town that we got to, why, no Gustafson. We waited and waited and waited, and he didn't show up. So we finally decided, well, he must have taken the wrong turn, and we would go on without him. So we got a place to stay that night in a Jugendherberg--that was what the Germans called these youth hostels--and those were huge things.

Anyway, then we started down the Rhine the next day.

Chall: Still without Gustafson?

Swent: Still without Gustafson. We got to Mainz, which is where that other road came in, and we went to the youth hostel there. Sure enough, he had been registered there, but he had already left, and left a note that he was going on down the Rhine. One of our eventual objectives was Cologne. So if nothing else happened, he would wait for us in Cologne, if we didn't find him before.

So Klauber and I went on for several days together, just the two of us. On our way down near Bonn, just bicycling the other way, we ran into a classmate from Stanford named John Savage, and he had seen Gustafson and said, "He's in Cologne; he's waiting for you down in Cologne." So we went on and eventually got to Cologne and found--Vernon's name if you spell it backwards is Nonrev.

Everybody called him Nonrev; that was his nickname. So anyway, we found Nonrev in the courtyard of the youth hostel there, doing his laundry.

From Cologne we went on down the Rhine and into Holland, [looks at large map of Europe] through Utrecht, and wound up in Amsterdam. Had a fine time in Amsterdam. Then we went on down to Rotterdam, and decided we would take a coastal vessel from Rotterdam up to Bergen in Norway. It stopped first at the port of Stavanger, and then went up to Bergen. Now Nonrev had some Norwegian ancestry, and his people had come from Trondheim. He wanted to go on to Trondheim, and Phil and I didn't want to take the time to do that. So he went on up to Trondheim and we agreed we would meet back in Munich, in Germany.

Phil and I debarked in Bergen and saw Bergen, which has greatly changed since then. I was there again last year. There's certainly a big change because of the oil business. At that time it was a pretty sleepy place. Then we took the train across to Oslo, across the big mountains. We got to Oslo and we stayed there for several days, roomed there. There was no youth hostel there, but we roomed with some University of Norway college students in a boarding house that they were in, and had an interesting time there.

Then we took off on the bicycles again and headed over to Sweden and down the Swedish coast. We bicycled part of the way, but we realized we were getting into tremendously long distances there. So we finally got on a train and took the train to Helsingborg and then took the ferry across to Helsingor in Denmark and bicycled down to Copenhagen.

In Copenhagen one of the high points was I looked up a metallurgist who had formerly worked at Tayoltita when I was a child. His name was Bengt Wadsted. He and his wife had lived in Tayoltita for three years, and they remembered me. I called on them in their apartment; I had their address. She was Jewish, and they had lived in Germany. They were very upset over what was going on in Germany at the time, about the persecution of the Jews. That's why they had left, because they felt she was at risk. They gave me quite a long lecture about the Nazi regime.

One of the things that Wadsted said he had done was that when they left Tayoltita they had come back to Europe by way of the Pacific and the South Seas. In the South Seas he had seen the outrigger canoes and he was very intrigued with them. So when he got settled in Copenhagen he had built himself an outrigger canoe. He said "It's the only one on Copenhagen fjord." And, "I want to take you for a ride in it." So we tried to find a time when we

could do it. There was only one possible day, and that was Sunday, when he wasn't working. He was a very busy man. So Sunday was the only day we could get together for it.

So, when Sunday came, it was a terrible, raw, windy day, terrible weather. But Phil Klauber and I went out to his place and then he drove us out in his car to the little cabin he had on the fjord. The Copenhagen fjord really isn't like a Norwegian fjord. There is very flat land around it, and it's not a deep thing, but it's still called a fjord. Because of the cold wind and everything, he said, "Well, here, put these clothes on," and he gave us some very heavy woolen clothes to put on. We tried putting them on over our regular clothes, which was what we were supposed to do, but we decided that was too uncomfortable. So we took our regular clothes off and then put the woolen clothing on.

Then we went out, got in his boat, and started sailing. We got maybe a mile offshore, and the water was very choppy. The fjord is shallow so that the waves were very choppy due to this wind. We were trying to go out against the waves, and it was just pounding away. We got about a mile offshore, and all of a sudden the mast broke off right down at the base. The canvas sail fell out over the outrigger. And, of course, the canvas sail soaked up water immediately and got very heavy and started to sink. That dragged the outrigger under, and pretty soon the whole thing was sideways in the water and swamped and sank right out from under us.

Chall: You had the heavy woolen clothes on.

Swent: We had all these heavy woolen clothes on which were soaking up water and beginning to drag us down. So we threw the woolen clothing off, got it off, and struggled in the water. Fortunately we could all swim. By then a crowd had collected on the shore and realized there was something wrong. They sent out somebody in a rowboat to pick us up. In the meantime I was swimming for shore. The others were trying to, but I was the best swimmer, so I went on. I bypassed the boat and went on to shore. The others got picked up by this rowboat. There were four of us: Phil Klauber, Bengt Wadsted, and another friend of his, and then me.

I started to wade to shore. There was a crowd of three or four hundred people there by then. I had forgotten that I didn't have any clothes on, and I walked out of this water without a stitch on. Suddenly I looked up and there was this big crowd there, looking at me. So I turned around and went back in the water to waist-high and then waded up the beach until we got opposite the cabin, then waded to shore at the cabin.

Chall: Were you cold by that time?

Swent: Oh, it was cold, yes. Bengt Wadsted served us a round of Danish schnapps to warm us up after we got back in there.

Chall: That's quite an adventure. Those outriggers somehow manage to get through, in the Pacific Ocean.

Swent: Yes, but it's deep water and the waves aren't as choppy. It certainly wasn't made for this type of wave. At any rate, he wrote me a letter later saying that he had managed to locate it. It was shallow; he could see it and he managed to locate it and then had it raised and had it back in commission again.

Then from Copenhagen we cycled on down to the very end of Denmark, and took a ferry across to a place called Warnemunde in Germany, and then cycled into a place called Rostock and then took a train over to Hamburg. We spent two or three days sightseeing in Hamburg and then went on by train into Berlin. We stayed several days in Berlin.

By then the German business was beginning to heat up with Czechoslovakia over the Sudetenland. We had sort of seen reference to it in the newspapers, but we really weren't reading the newspapers. When we got to Berlin, you heard a lot more about this.

So we decided, well, we'd better find out what's going on. We bought the London Times, which was on sale, and pretty well got ourselves up to speed. Then we said, well, we don't know what to believe, because there was a lot of conjecture in those stories, too, as to what might happen. So we decided to look up a German foreign student who had been at Stanford, an exchange student, and see what he could tell us. He had been a very jovial, outgoing fellow, had been very amiable when he was in the States. So we looked him up and he had just changed drastically. He said, "There's going to be war; you should get out." He was really uncommunicative and wasn't friendly, at all.

Czechoslovakia and Hungary

Swent: Again, we didn't really know what to do. We had originally planned to go on to Prague and then down to Munich. So we decided we'd go through with that plan. We took a train down to Dresden and stayed over and did sightseeing in Dresden. Then we bought a train ticket from Dresden to Prague. When we got to the Czech border the train stopped and didn't go any further. They said that service had been discontinued to Prague. So we got our bikes off the baggage car

and cycled across the border. There was nobody at the border, either on the German side or the Czech side. By then the Czechs had mobilized and had troops, but they were withdrawn about a mile or so from the border. The Germans had done likewise; they weren't facing each other across the street or anything.

So we cycled a mile or so until we got to the Czech lines, and then they apprehended us. There were no civilian authorities; it was all military. We had put little American flags on our bikes, because we thought this might be helpful. And it was. The flags were very helpful. But the soldiers in essence made us prisoners, and went through all our bags and everything. I had bought a camera in Berlin, a German Contax camera. They didn't take the camera, but they found a hunting knife I had bought, a German steel hunting knife, and they took that. The story was that it would be returned to us when we left the country. But we never saw it, of course. Then they gave us an escort and took us from the front line back to a second line of soldiers that were another mile or so in the rear of the front line. We went through three lines this way, and then they released us into the interior.

Chall: They didn't keep you from staying there?

Swent: No, no. Once we got through the three lines of soldiers, they turned us loose. We cycled on into Prague.

Chall: What time of the year was this now? You were there six months, so you had to go through Christmas and a winter season. Were you getting into winter now?

Swent: No, this was late September. Then it was just a few days before the Munich conference. The Munich conference occurred a few days later. Anyway, we got to Prague. I don't remember just what sort of a place we stayed in. We got a place to stay, then the next day we went to the American Embassy and registered there, because we thought things were bad enough that we had better let them know we were there. Of course, the embassy people were furious with us for having come in at all. They were trying to get people out of there. So they took note of us and where we were staying. They didn't know what was going to happen any more than we did.

So we went on and started doing our sightseeing, and had a very interesting time. The entire country was mobilized. As we had been cycling in we could see them, people reporting in for duty and then being trucked around and mobilized and issued their equipment and being put on stations. Everything was blacked out. At night you saw no lights at all. They were fully expecting war any day. The Czechs were fully prepared to fight the Germans.

It was an adventure. We weren't really alarmed or worried about our safety. But after a couple of days of sightseeing in Prague, we got word from the embassy that there was going to be a refugee train out that night, and it would be the last refugee train out of Prague. It was going to Budapest. They wanted us on that train. So we said okay, we'll do that. We got our stuff packed and proceeded down to the train station. The train was to leave at about 8:00 or 9:00, I think, that night.

It was pitch dark when we got to the railroad station and absolute confusion, because the station was dark. No lights were allowed. The only lights that there were were little blue lights that the railroad employees were allowed to use. They didn't really shine very far. Hundreds and hundreds of people were jammed in there with all their belongings. People had great big bundles, stuff tied up in bundles in sheets, suitcases and backpacks and everything you can think of. It was all stashed on the floor there. You could hardly move around without stumbling over something in the dark.

They finally opened the gate and let people go on the train. Of course, we were way behind in the crowd. We couldn't find a place on the train anyway. Everything was jammed, so we just stood in the hallway for the first few hours, and finally there were people who got off and we managed finally to get seats.

Chall: What did you do with your bicycles?

Swent: We had put those on the baggage car. This was one of the reasons that we were unable to get a seat on the train. By the time we got back from the baggage car, all the seats were gone. Then around dawn, early morning--the train moved all night; it stopped a few times. We didn't even know where we were most of the time. It was mass confusion.

We got to the border town of Bratislava, which is right on the border between Austria and Hungary--I mean, it's almost a three-way meeting there, Austria, Hungary, and Czechoslovakia. But it's technically between Czechoslovakia and Austria. Anyway, we decided that we weren't going to run out of the country like all these other refugees, that we would bicycle out. We wouldn't finish the train ride to Budapest. So we got off the train and claimed our bicycles and then cycled on a short distance to a town called Rajka. We crossed the border into Hungary there, and had an interesting little development there.

We had English bikes and, of course, one of the problems we had with bicycling in those days was that every country wanted to put a duty on these bicycles, on foreign bicycles. If you didn't

want to pay the duty, there was a method of registering them and paying the registration fee of some sort which you didn't get back, but you then got a certificate which you could show that exempted you from duty in most of these countries. We had elected not to put up that kind of money, and when we got to the border, to Hungary, the Hungarian people were very dubious about these British bikes. They looked them over very, very carefully. We assured them that we were going to take them out of the country, that we weren't going to sell them in the country. This was the principal worry they had. So to make sure of that, they took our passports and made a note in the passport of the serial number of the bicycles, and wrote a bunch of stuff in Hungarian goulash, which we couldn't understand. We didn't know what they were putting in there. Anyway, then they let us go.

We cycled on into a little town, well, it was a fairly large town, called Gyor. At that point we decided the trip on into Budapest was probably too far and we would fall behind schedule, so we took a train on into Budapest. The first train that came along --it was getting into afternoon by then, and by the time we got to Budapest it was well into evening, about eight o'clock or nine o'clock in the evening. But at the station in Gyor--now we had language problems. Up until now, we had not had too serious a language problem, because I spoke French and I had taken a year of German at Stanford. So we managed pretty well without language problems. But when we got into Hungary, we had real language problems.

I went up to the window to try to buy the tickets. Usually you had to buy a ticket. If you wanted to put your bicycle on the baggage car, you got a ticket for the bicycle. Those tickets were quite cheap, no serious problem from the point of view of money.

I went to the window and I asked for two tickets to Budapest. That was easy; Budapest they understood, and I held up my fingers for two. Then I didn't know how to ask for tickets for the bicycles, so I said it in German, that I wanted tickets for "zwei fahrrader," which is "two bicycles" in German. The clerk didn't bat an eye and bounced out two tickets. The amount of money seemed about right, so I paid it. When the train came in we went up, put our bikes on the baggage car, and showed these tickets. The baggage attendant looked a little dubious, but the train was going to go. So we went back and got on and it took off.

When we got to Budapest in the evening and we went up to claim the bikes and showed these tickets, they wouldn't give them to us. We insisted and insisted, and showed them they were there--"Those are our bikes"--and they wouldn't give them to us. We didn't know how to handle this. We couldn't speak with them and they couldn't

communicate with us. Finally after quite a little hassling the police came up and took us in tow. We couldn't understand them either, and they couldn't understand us. So we asked for an interpreter. There was an interpreting service in the station. So they took us and located this interpreter and finally through him--and he wasn't very good, but--

Chall: Did you talk in English or in German?

Swent: No, I think we had to talk French. This fellow's English was terrible, I remember. Anyway, we finally got the story unfolded. It turns out that the tickets that I had bought for "zwei fahrrader" weren't tickets for two bicycles, they were tickets for people to a town called Zvarfold. Just by accident the amount of money had been about what I'd expected to pay for two bicycles. And these tickets weren't any good for bicycles. We finally got it all sorted out. By the time we got out of there it was midnight. We got out with the bicycles finally, and found a place to stay.

Of course, Budapest was mobilizing then, too. The next day they had a big flyover of airplanes, military aircraft. They tried their sirens and their warning system, air raid sirens. And everybody was expecting war to break out at any moment. And this was now the time of the Munich Conference. I don't remember the exact days. Late in September, September 30 or so when the conference was going on in Munich. We finally got word in Budapest that the settlement had been reached. So when we got through with our sightseeing we headed back out to go to Vienna. This is still, of course, just Phil Klauber and me together. We had not yet caught up with Gustafson.

Chall: That's right, you were going to meet in Munich. You had quite a bit of adventuring before you caught up with him!

Swent: So we went up to Vienna and stayed there two or three days. We didn't have anything unusual happen there.

Chall: Were they also mobilizing?

Swent: Oh, I should remember. I shouldn't forget. There was something unusual going on there. The Germans had already taken over Austria. The Anschluss had occurred earlier in the year, so the Germans were everywhere. The Germans drove on the right, and the Austrians drove on the left. And the Germans were making the Austrians change over to driving on the right. It was mass confusion in the streets. There were signs all over the place and great big lines painted on the streets. It was a tremendous, really very interesting experience there. We did the conventional sightseeing and we went through all of this.

Chall: But you weren't bothered, as Americans. The army people didn't bother you as you were going through?

Swent: No, they didn't bother us. No, we had no immigration problem or anything. This is coming down quite a few years, but in 1985 I was back in Europe on a pleasure trip and back to Vienna, really for the first time since 1938. I went to a Rotary Club meeting. (I am a member of the Oakland Rotary Club.) So I went to the Rotary Club in the middle of Vienna. I sat alongside a young fellow, considerably younger than I then. He spoke pretty good English, and we carried on a conversation. He wanted to know if this was the first time I had been in Vienna. I said, "No, I was here once in 1938." I recalled to him that at that time the Germans were forcing them to change over from driving on the left to driving on the right. He said, "Oh, yes. I was a very young boy then, but I remember that, now that you mention it." He said, "We lived in the country and we didn't have an automobile. All my father had was a cart and two oxen. But it took us over a year to train those oxen to go on the righthand side of the road." I had never thought of this, never thought that that was a problem.

Chall: It's a whole cultural difference. How are they driving now? Are they driving on the right?

Swent: Yes, they're still on the right.

Chall: That makes it a lot easier for the rest of the world.

Germany

Swent: So then from Vienna, Phil and I took a train on to Munich, crossed into Germany. Of course, it was all being run as one country then. Technically we crossed the old German border and went back into Germany to Munich. We went to the youth hostel in Munich, and sure enough, we found Gustafson there. We had had some exchanges of postcards by mail in the meantime.

Chall: Where did you mail them?

Swent: Well, we used American Express for mail forwarding. It was a lot simpler then than it is now. You didn't have to register with American Express or anything else. They would just keep the mail when it came if it was addressed to a particular office. So we had had some exchanges.

Anyway, we caught up with Gustafson. He was there in Munich during the conference when Mussolini and Chamberlain and Hitler and--who was it, the Frenchman whose name began with D--

Chall: Daladier.

Swent: Daladier, when they all met. In fact, he had seen them parade through the streets and had taken a picture from the top of the building he was in and that sort of thing.

We stayed on in Munich for several days, had a big fine time. We went to the Oktoberfest, which is the big thing there. I have never seen anything like that before or since. They had these huge specially-built beer halls where the Oktoberfest was held, which was just a great big park. They were just temporary things; they were covered with great big tents. Each brewery had its own stand out there, and these installations were tremendous. They would have two or three stages with German bands playing on them. Then several places around the edges and the ends of the, I guess buildings or tents, where they had these large, large casks of beer. They were fully eight to ten feet in diameter, and fully as long as that, maybe a little longer. They were on their sides with a spigot at the bottom, and nothing but plain glass liter mugs.

They never turned those spigots off. They would open one up and a fellow would grab four or five of these liter mugs in one hand and then four or five in the other hand. So he would have maybe eight or ten mugs, and they would just run those through, one right after the other. As soon as he stepped aside there was another guy who took his place so that none of the beer was spilled.

Chall: These are the waiters?

Swent: Waiters, yes. They just kept the spigot open and running continuously. They never had to turn one off until the thing ran empty, and then they would shift to another one. There were just two choices; you had light beer or dark beer. There weren't many varieties. But they would have these barrels in pairs, a light and a dark colored. We went to two or three of these. The German bands were fabulous and it was just a marvelous evening.

The youth hostels had a ten o'clock curfew. We didn't get back until about midnight. And we couldn't get in. They had locked up, lock, stock, and barrel. We had trouble getting in. In fact, we didn't get any response to pounding on the door or anything. So there was a gutter pipe coming down from the second floor--well, from several floors up, but it came down the front of the building. I decided I could climb that. There was an open

window on the second or third floor, right by it. So I shinnied up the pipe, went in, got into the room and then found my way downstairs and opened the door for the other fellows. Nothing was said the next morning. We didn't hear anything about it. I guess they hadn't even missed us.

Those German youth hostels were tremendous. They were just like the beer halls--they were just crowded, crowded, crowded. And they had tremendous numbers of--well, they had a German youth--technically, it was sort of billed as a youth camping or youth hostelling group. But it was paramilitary training. They were all trained in marching in formation and that sort of thing. When one of those troops came in, they just took over. They were not in any way interested in fraternizing with foreigners or anything else. Most of them were in the twelve-to-sixteen-year-old age group.

There was a tremendous national drive going on to unify the country and get their spirits up, I guess, for war. Hitler was giving fiery speeches all the time. We sat through one in a big assembly hall. I forget whether this was in Berlin or whether it was in Munich, but I remember sitting through this long speech and tirade by Hitler in German.

Chall: Is that so?

Swent: On the radio, of course. He wasn't there in person.

Chall: Oh, I see. Yes, I wondered. Was he pretty spellbinding?

Swent: Well, he certainly held his people. We couldn't understand what he was saying.

Chall: You could get the tone of voice.

Swent: Yes, you could get the tone. They played the German national anthem, which I didn't recognize. I didn't know what it was. But everybody stood. We assumed that it was the national anthem, but we didn't know what it was. So Phil and I didn't--at least I didn't; I don't remember whether Phil stood or not. I didn't stand, and immediately after it was over a couple of German boys came over and wanted to know why I hadn't stood. I think I did know enough German that I could speak with them, and I explained that I was an American. It took a little while to iron all this out, but we finally got the concept across that we were Americans. They said, well, this was the German national anthem. I looked German anyway. I was blond at that time, not grey-haired the way I am now, and I am Germanic in some of my origins. We were wearing the short leather pants and that sort of thing that they wear, so we looked quite German, and had a German camera.

That was one little incident. There was another one at the same place where we ran into a girl who was probably, oh, seventeen or eighteen. She spoke a little English, so she got to talking to us. She wanted to know why everybody hated Germany. We had quite a long conversation about Germany and the First World War. It turned out that she was very ignorant about World War One, and this was probably the case of many of the youth. Their education was slanted. They didn't get the version of World War One that those of us on the Allied side got. She was wanting to know why everybody was against Germany and why they had to fight and this sort of thing. It was very interesting and illuminating.

To go back a little ways, we noticed when we first went into Germany from France, way back on the Moselle River, that they had adopted a greeting custom of saying "Heil Hitler" to each other. Downtown, in town, you didn't say "Heil Hitler" to everybody you met on the street. But if you were walking, say, in the suburbs or in a rural section, and you met somebody on the street, you said "Heil Hitler" to them and you raised your hand, saluted with the "Heil Hitler" salute. Going down, bicycling, we noticed the bicyclers we met all said "Heil Hitler" to us because the traffic in bicycles wasn't very great on the highways. It was in town; bicycling was a tremendous commuting method. But when you got to traveling it wasn't so much. You would just see an occasional biker. But whenever you met a German they would raise their hand and say "Heil Hitler," give the salute.

We thought this was kind of interesting. We thought it was really going too far, but we had to do it to get along. We took to being very sure that when we were biking downhill and ran past a German coming uphill, we were very sure that we raised our hand and saluted "Heil Hitler" because we could afford to do that. The poor guys struggling uphill had to take their hands off the handlebar and salute back. [chuckles] Many of them lost their balance then and would have to stop and start walking because they had lost their momentum, lost control of the bike. We thought that was a lot of fun. We used to be sure not to miss that opportunity going downhill.

Chall: They apparently felt honorbound to--

Swent: No German dared not respond.

Chall: They'd never know who you were.

Swent: Well, that's about all for Germany. From Munich, after we got caught up with everything there--we stayed quite a few days in Munich and enjoyed it very much--we set out for Italy. We went down first back into Austria to Innsbruck and stopped and looked

around there, and went to Oberammergau and saw the site of the Passion Play. We didn't see the Passion Play, but we saw the site. We went to Garmisch-Partenkirchen and saw that. The we took a train bound for Venice, going over the Brenner Pass road.

Italy, Yugoslavia, Greece, Switzerland, France

Swent: When we got to Brenner Pass, we came to a little parting of the ways, because Phil and Gustafson wanted to go from Venice on back down to Rome, then back up through Milan to take their ship back to the U.S. I wanted to stay on in Europe longer. I had a different itinerary I wanted to do that was going to take two or three months longer. So at Brenner Pass I decided I would get off the train and cycle down to Venice. They took the train on down. It's all downhill. You're way up in the altitude at Brenner Pass, and you just coast all the way into Venice.

I did that and I got down to Venice. I had to stay one night in Bolzano in a little rooming place. I had a very nice time there, a little Italian rooming house. But I found when I wanted to get up and get a start early in the morning--about six o'clock--when I tried to get out of the building the place was locked up. I couldn't get out. I hadn't paid for my room, but I knew how much it was. So, I went up and back to the room, looked out the window and saw that I could probably get down to the street using a sheet to let myself down. I left my room rent on the table and lowered my bike bags down on the sheet to the sidewalk, and then climbed down the sheet myself. Fortunately they had not locked up the bike; I could get out.

Chall: Where was your bike?

Swent: I've forgotten, but I was able to get the bike out. I think it was just padlocked out on the street or something. I was able to get going and got down to Venice that night, and caught up again with Phil and Gus. They were still in Venice. We spent two or three days in Venice together. Then we did part ways for good. I took a ship, took deck passage on an Italian vessel that went from Venice over to Trieste and just made a port stop there for a few hours. Then down the Dalmatian Coast. I stopped at a place called Pola.

Chall: So you didn't go down to Rome at that time. You just went over to Yugoslavia or whatever they called it in those days.

Swent: Yes. Well, Trieste was still at that time part of Italy, and Pola was still in Italy. Then I went down to a little island at a

little port called Zana, which was still Italian. Then down to Split and to Dubrovnik. At Dubrovnik I got off the boat. This was what we called deck passage.

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You had to carry your own food with you. Or you could buy food on board. Most of the people that were taking this brought their own food. They brought fruit and cheeses and sausages and what have you, and carried their own food. Usually they were only on overnight or something, and they would sleep on the deck, just have a blanket or something rolled up and sleep wherever they could.

I got to Dubrovnik and took a train up to Sarajevo. Here was my first real experience with Moslems. This part of Yugoslavia, I hadn't realized before I got there, is heavily Moslem. The women wore veils. I remember being very startled. I hadn't seen these veils. I got on the train and got a seat big enough that I could lie down and sleep. I was very tired, so I did that. It was a late train, late in the night. As it got dawn, when we got close to Sarajevo, I woke up and was looking around. It wasn't quite fully light and there was a woman sitting opposite me who had a veil on. In the light it looked so startling. It looked as if the top of her head had been cut off. Just the peculiarities of the lighting at the time. Boy, that really woke me up. I sat up with a jerk to see what it was. Then I found out that she was wearing this veil.

In Sarajevo I had a very interesting experience. Somehow or other I made friends with a fellow who ran a tobacco store there, and sold all kinds of tobacco. He was very interested in foreigners. He spoke English, and I think he really wanted to practice his English. He was very friendly and helped me do the sightseeing and that sort of thing. He found out that I spoke Spanish. "Oh," he said, "there's a Spanish restaurant here. We should go there and you can speak Spanish to them." We made an arrangement to go there for dinner. We went and it was extremely interesting. It turns out that the family running this restaurant and the waiters were a group of Spanish who had emigrated from Spain. They were Jewish, and they had emigrated from Spain in the days of Ferdinand and Isabella.

Chall: During the Inquisition.

Swent: During the Inquisition, yes. They still spoke the Spanish of those days.

Chall: Good gracious!

Swent: I had a terrible time with that, and they had a terrible time with me. But we could get a few words in common that we both understood, and it was a very, very interesting session. But that language has just changed drastically.

Chall: It's almost like the difference between Chaucer and--

Swent: Yes, exactly. Chaucerian English and present-day English.

Chall: They also probably spoke Yugoslavian, I presume.

Swent: Yes. This fellow who was with me could handle that part of it. It was very interesting and very educational for me to realize how much that language has changed. I thought I could handle all Spanish, and I can handle all current versions of Spanish, but I can't handle that one.

One of the things, of course, I saw there was where the Archduke was murdered in 1914, the site.

Chall: Did they have the footprints in the cement then, and the little museum right around the corner from the bridge that they have now? There's a museum, an old building.

Swent: Yes, there was a little museum there, but I can't remember the footprints.

Chall: They were footprints that showed where the fellow who shot the Archduke was standing.

Swent: I don't remember that, but I remember this friend of mine going through the entire thing and describing it in detail to me, and showing me where people had stood and all that.

After several days in Sarajevo I went on to Belgrade by train and stayed there. That was quite uneventful. Then I went on by train to Sofia in Bulgaria and stayed a few days there, and took the train on down to Istanbul in Turkey and stayed there for several days. I had a fascinating time there; no particular unusual adventures. I took deck passage on a Russian ship from Istanbul to Piraeus, the port of Athens. Put the bike on board and then we started out.

Chall: Let me back up just a moment. In Yugoslavia and even in Italy, to the extent that you were there just in Trieste and Venice, was there any concern about the possibility of war or anything of that kind that you had seen? Or did they really think that there would be "no war in our time"?

Swent: Well, my impression is that by then the Munich Conference was over and the crisis was over. People thought there would be no war, and everything was back to normal. We had no further events of that nature on the trip.

In Istanbul, as I say, we started out on this Russian ship with deck passage, and after, oh, an hour or two, one of the ship's officers who spoke a little English looked me up and invited me to go to his cabin and talk with him. He was Russian and he was just very interested in learning more about the United States and what I was doing, where I was going, what I'd been doing, and that sort of thing.

We went down to Athens. I don't think there were any youth hostels there, and I stayed in some sort of boarding house. One of the persons I ran into there was John Savage whom we had last seen up on the banks of the Rhine River. He was now down in Athens. He and I did sightseeing around Athens together for a couple of days. Then I took another deck passage on a Greek ship from Athens through the Corinth Canal over to the island of Corfu--just for a port stop there; in fact, I couldn't even get off the boat there--and then on up to Brindisi down on the end of Italy. Corinth Canal was very interesting. I never realized what a work that was.

Chall: That is a canal?

Swent: Yes. It's a big canal, and it's very, very high. The banks are very, very high and steep. Corfu--I would have liked to have gone ashore, but we couldn't. We didn't dock. We anchored out and had lighters and services. I got off at Brindisi. I took a train from Brindisi up through Foggia and across to Naples. I spent several days in Naples and went out to the Isle of Capri. Took a boat out there and spent a day or so wandering around there. Visited the Blue Grotto. Then back to Naples and took a train up to Rome.

I had thought I might catch up with Gus and Phil. By this time Peterson had long since come back and gotten married. I thought I might catch up with Phil and Gus in Rome, but they had left a few days before. There were some other Stanford people there that I knew. One of them was a fellow named Bob Hartman, who later was a major advisor to President Ford. I spent several days in Rome; nothing particularly unusual there.

Chall: How did Rome impress you? Of course, you had been seeing some mighty impressive sights along the way.

Swent: Yes. Well, I wasn't extremely impressed--I was impressed by the size of some of the things that they had, and by the old things.

The Colosseum, of course, is always impressive. I was very impressed by St. Peter's.

Chall: What about Mussolini's influence?

Swent: Oh yes, Mussolini was really in his apogee at that point. He had built this tremendous monument, the White Monument, that I saw in later years. It was just sort of decayed afterwards. But it looked very white and resplendent at that time.

From Rome I took a train up to Florence and spent a couple of days sightseeing in Florence. Then went on up to Milan and took the train up to Lucerne in Switzerland. I stayed several days in Lucerne. Of course, I have Swiss ancestors. My great-grandfather came from near Basel, and as a child I had heard stories about Lucerne and some of the heroics that happened there.

It was very foggy when I got there. This was now November. I was waiting for good weather. I waited a week and we didn't get any good weather. The landlady that I stayed with was very sympathetic, but finally I left without really seeing much, other than what I could see through the fog. Didn't get any of the views or anything like this.

Then I took the train over to Basel. I had talked with my step-grandmother, and she had told me how to get out to this little town where my great-grandfather had come from. She and my grandfather, Rudolph Gschwind, had gone back and visited there in 1903 when they were married. She thought I should go there. She had given me all the details of how to get there, so I got on the bicycle in Basel and started bicycling out. It was about thirty kilometers.

I finally got to this little town called Metzerlen, which is the town I was looking for. Just a one-lane paved highway going into it. I didn't have any addresses in town, or any names. So I went to the church and started looking around the gravestones and found the names of some of the ancestors that I recognized. I went to the priest there and told him what I was trying to do, and told him that I wanted to meet the descendants of these people there. "Oh yes, yes;" he knew who they were.

He took me a little ways to an inn and introduced me to a gentleman named Joseph Monnerat and his wife. It turns out that Joseph Monnerat actually was a direct descendant from my great-grandfather's family, but had changed names in the course of several generations because of going through a marriage. A woman descendant had married and changed names. But they were very hospitable. They ran an inn there. Since I had already put up in

a youth hostel, which was in an old castle a kilometer outside of town, I didn't have to bother to stay with them, although they would have put me up, I think, if I had needed it.

Chall: Were there any other cousins around, or descendants that they knew of?

Swent: Well, not really. But they had some old pictures of when my grandfather had visited there in 1903. Of course, Joseph Monnerat had been a little child then, but he remembered his having been there. They had two little sons. They were very cute, and I took their picture before I left there. I had two or three interesting days there, and then I went on.

I left early one morning and bicycled down the road a little ways and then came to the French border and went on into France. This was a very isolated French border crossing. It was not a major one like it would have been at Basel. The Hungarian goulash in my passport came in very handy, because I wanted to go across the border. France is one of the countries that has a duty on bicycles. This guard there wanted to have me pay a duty on the bicycle. I didn't want to do that. Technically these duties were refundable when you left the country, but I just never liked to put up the money if I could avoid it. So I showed him this stuff in the passport that was written in Hungarian. I told him in French that that meant that I didn't have to pay the duty. He couldn't read this stuff any more than I could. But he could read the serial number. The serial number was in Arabic numerals. We checked the serial number and it checked, so he believed the story and he didn't charge me any duty on the bicycle.

I need to go back a little ways. I skipped one thing. While I was in Metzerlen I decided one day that I wanted to go back to Basel and across into Germany and, oh, buy some film and things for my camera. I had a German camera, and the film was more expensive in Switzerland. I had several things I wanted to buy, so I went back. I cycled over and by then I had bought a new German hunting knife because the one I lost in Czechoslovakia never got returned. I bought this, I think, when I got into Germany.

Coming back I crossed back into Basel and started cycling on the road back to Metzerlen. I got near Metzerlen and there's a long hill going up there. I started cycling up there using the gears on the bicycle. Some fellow came cycling up from behind me and crossed in front of me and then stopped. I had to stop. He started asking me some questions and wanted to know where I was going and what I'd been doing. I didn't understand the drift of his questions. I could understand the questions--I spoke in French, and he tried to speak in German. (This was a German-

speaking part of Switzerland, actually, but I preferred French.) So we couldn't reach anything amicable, but he was standing there holding my bike so that I couldn't get away or anything.

We were just a little ways out of another town, maybe a quarter of a mile outside of a little town. I saw that there was a little beer hall back there, so I finally suggested to him, "Well, let's go back there and we'll have some beer and we'll talk about this." I went back there and I thought maybe at some point I could get away, that he would relax and I would leave. But he sat right down at the table with me. He didn't go to the men's room or anything else. He just sat right there with me. Then at one point he got up. I thought he was going to leave, and he did leave, but I saw him turn to somebody at a neighboring table and give them some sort of a signal, pointing to me, and then he left. I figured, well, he's told these people to watch me. So I decided I would not leave while he was gone.

In a few minutes the police came in and took me in tow and started asking me questions about where I had been and where was my companion. I said, "I've been traveling alone for several days." They asked me lots of questions. Finally I said, "I'm an American citizen and I won't answer any more questions unless I'm taken to the American consul." Well, that sort of stopped the questioning. I think it was a case of mistaken identification. They went through all my gear, everything I had on the bicycle, thoroughly, and couldn't find anything that they were looking for. I think they had been watching somebody else and had me confused with whoever they were trailing, because they were very concerned over a companion, and I had not had a companion for days or weeks. I think it was a case of mistaken identity. They finally turned me loose, and I never did hear any more about it.

Chall: It's somewhat frightening, though. Were you concerned, or did you just take it in stride?

Swent: Well, you take it in stride at that age. I had these few other incidents. We had that one in Budapest, and we had one other one in a German railway station. I forget where now, but I do remember the incident. Phil Klauber was around at the time; we were traveling together then. I was stopped by the police because I looked like a vagrant. They didn't think I had any means of support. I did have a money belt, which I carried inside my clothing. When I showed them that I had some money they let me go. But we had had a number of these little things happen. Things were a little more strict in those days than they are now.

I went on into France. Crossed there, and went on down to a town called Besancon in France and stayed overnight there and had

an interesting time on the Doubs River. All this was cycling. I cycled over to Nevers. This was flat country, and by then I could do a hundred miles a day easily. Then over to Tours and as far down the Loire River as Saumur. Then came back up to Blois and then Orleans and then on into Paris. Did a lot of visiting of chateaus and was very interested in all the chateau country and the history there.

In Paris I stayed in the same Auberge de Jeunesse that I had stayed in before, and stayed there a couple of days. Then I took off for Brussels and Antwerp. The ship I had booked passage on was to sail from Antwerp in late November. I stayed at a youth hostel in Antwerp. I got there two or three days before the ship sailing. One of the things I had to do was get rid of my bicycle. I didn't want to take that home to Mexico. I didn't think I had any place for that. The trip I had scheduled was from Antwerp to Veracruz, Mexico. My folks were going to meet me there, and we would go back to Tayoltita for Christmas.

Chall: I see. So you didn't spend Christmas and New Year's there in Europe.

Swent: No. I met a couple of American boy scouts at the youth hostel in Antwerp. By then the youth hostels were deserted. There were very few people in them. We had this thing all to ourselves. I sold my bike to one of them. They had just arrived, and they were just beginning their trip. I don't have their names at hand; I may be able to look them up. A great big tall fellow and a short fellow; both of them were from Wisconsin. They were very interested; they wanted to know all about how to do all this stuff. I was the old-timer at that point and told them about all this. I sold them the bicycle and then sailed on this Hamburg America line ship called the Orinoco.

I had what I called an international cabin. This was a much longer trip than we had coming across to Glasgow. I had taken second class, and I had a cabin for four people. I had a Mexican, a Swede, and a German as roommates. I was an American, so I called it our international cabin. The German was a fierce Nazi, and he really irritated the rest of us. When he came in to go to bed at night, and usually after some of us had already gone to bed, he would turn on all the lights and sing the Horstwessel song (the militaristic Nazi song) while he was getting undressed and going to bed, wake everybody up, clump around. Very inconsiderate. The rest of us sort of had a little conference and said, we'll try to shame this fellow into behaving better. We agreed that whenever any one of us came in later, after anybody had gone to bed, why, we wouldn't turn on the lights, we would be very quiet and go to bed

in the dark and not disturb any of the others. So we started practicing that.

One night several days after we had started sailing, I came in. I was the last one to come in; I had been staying up later than usual. I came down and everybody was in bed, so I went to bed very quietly, slid in under the sheets and went to sleep. I slept in late in the morning. Everybody else had gotten up and was gone. When I woke up and got out of bed, I saw just a tremendous dark brown smear down the sheet. I said, "Oh, good lord, something went wrong last night. I don't know what."

I got the sheet off the bed and washed it in the sink. I called for a clean sheet and got the steward. He brought me a clean sheet and fixed the bed up. I started to go up on deck, and as I was going up the stairway the Swedish roommate was coming down. "Oh!" he said, "You finally got up!" He spoke some English. He said, "Did you find that piece of chocolate candy I left on your pillow last night?" I said, "Yes, I found it all right. Thank you very much." [Laughter]

In 1952 I was working in Mexico at Tayoltita. At that time one of the big things was a new development in drilling steel in mines, and Swedish drilling steel was the big thing. We had had several makes of Swedish steel that were being offered to us, and about the third make was one called Fagersta.

The fellow selling this came in and asked to see me, because I was sort of in charge of the property at the time; the manager was gone. He gave me this long pitch, and I kept looking at him and looking at him and saying, "Gee, this guy looks familiar." Finally, I remembered that this Swedish roommate on the Orinoco had been in the Swedish steel business. So I finally asked him, "Well, tell me, did you take a trip from Antwerp to Veracruz on the S.S. Orinoco in November, 1938?" He said, "No, but my brother did." I said, "Oh, that's interesting." "Yes, he had told me a story about a crazy American he roomed with." I said, "What was the story?" Then he told me the story about the piece of chocolate candy. [laughter]

Interim Period of Work in Tayoltita: Geologist's Helper, 1939

[Date of Interview: September 18, 1987] ##

Chall: Today I think we're going to start with your return to Tayoltita as an engineer, geologist helper, in 1939. That was after you'd

finished Stanford and had your bicycle trip through Europe. This was between your years at UCB, I gather.

Swent: Well, it was after Stanford and before UCB.

Chall: Exactly what were you doing in Durango? Why did you go down there? Was it just to get some money for the next year?

Swent: Well, I don't think money was the objective. I wanted to do something, but I was on the payroll of San Luis Mining Company. My father had been manager there for many years, so it was something of a nepotism position. I didn't ever worry about the money, because I figured I was lucky to have the job. More than anything else, I had to do a good job to justify having it.

Chall: Did your father want you to have some experience? You could have done something else, I presume.

Swent: Yes, but I had majored in engineering in Stanford, with an emphasis on mining. And I was intending to go to the University of California mining school in the Hearst mining building the next year, so this made sense to be in a mining operation. Over the years Dad had done a marvelous job of preparing me for a career in mining, if I wanted to do it. He never put any pressure on me to go into mining, but he showed me everything there was about that operation at different times when I was there. He taught me surveying and, as I mentioned before, he tutored me in algebra. He went through the plant with me a number of times and explained the function of every piece of equipment in it. He did a very good job of preparing me, and also in the choice of courses in college and that sort of thing.

Chall: I see. He was a real mentor.

Swent: But at any rate, we got back from the trip to Europe, came back to Veracruz, arriving there in early December of 1938. My folks met me there, which was probably good because I was getting pretty close to running out of money on the trip. Then we took the train to Mexico City and then back up to Mazatlan, and then took the plane into Tayoltita.

I went to work for Rodgers Peale, a geologist. He was a Harvard graduate and had worked in Peru just prior to coming up to Mexico with San Luis. He had been recommended by Dr. McLaughlin. I don't know if I've said this before, but Dr. McLaughlin and my father were very close friends, and Dr. McLaughlin was a consultant for San Luis. He kept feeding Harvard geology graduates into the geological positions of San Luis.

At any rate, Dr. McLaughlin, in a great contribution to mining geology, had developed of a method of detailed mapping of underground workings which he had his geologists do at the various properties where he consulted. He would come around once or twice a year and look at the results of this mapping. Then he would get a real good overview of the situation from that and make his recommendations for additional exploration work, where to look for additional ore. This was very successful, and set a new pace in the mining geology field.

At any rate, I started to work with them. Soon after the first of the year, I think maybe in January or so, my folks left Tayoltita and went to San Francisco. This was their real break with Mexico. They actually physically moved out of the house. I was there a few weeks with them, through the Christmas and New Year's holidays. Then they moved out, lock, stock and barrel. Oh, they left a few things, but basically they were moving to the States at this point.

Chall: Was there going to be another manager or director taking over in Tayoltita at that time, replacing him?

Swent: Well, the person in charge was already there and had been there for years. That was Lawrence Morel. I had known him since I was very small. He had come about 1920.

Chall: He wasn't going to move into the house then?

Swent: No. No, he already had a house. Actually, the house was reserved.

My dad was fighting the U.S. income tax and he did not intend to move, actually change residency. Under the U.S. tax law at that time, if you spent more than six months of the year out of the country you were entitled to the foreign residence situation and only had to pay tax in the U.S. on the income that you earned while in the U.S. So he intended to spend more than six months in Mexico, but in increments of a few weeks at a time, and actually take up a place to live in the U.S. In the long run this didn't work out. It worked at first, but about 1941, why, they began insisting that his absence be continuous rather than intermittent. And finally he had to start paying the U.S. taxes on all his income. But that was the situation when he left in early '39. So I was left alone. I lived in the house; I still lived in it and was knocking around in it.

Then I worked with Rodgers Peale in and out of Tayoltita. We also would fly up occasionally to Guanacevi and spend a week to two weeks up there and then come back. The first job that we did at the beginning of the year was the calculation of the ore reserves.

This was an annual job. Almost all mining companies do this once a year, generally, as of the first of the year. But whatever the fiscal year happens to be, the geologists are asked to make a formal estimate of the ore reserves. So this was the first job that I worked on with him in January.

Controlling a Severe Highgrading Problem

Swent: It was a very exciting time in Tayoltita at that time. The mine, of course, was a high-grade mine, and one of the major problems that it had had for all the years that I remembered were what we call the highgrading business, or the stealing of ore by workers from the mine, and sometimes also in the mill, in the processing plant.

At the time, this was probably the richest silver mine in Mexico. And the highgrading had gotten just absolutely, almost uncontrolled. The company hired sixteen detectives and a lot of new watchmen in an effort to try to control the highgrading. Another company, the Mexican Candelaria Company, had a property called Contra Estaca, which was about three to four hours muleback ride away from us. They did the same thing, and these detectives were all armed. Our head detective was a fellow named Barrasas. I'm not sure how to spell that. He reputedly had been involved in the shooting of Pancho Villa in the early 1920s. He was a magnificent shot. I saw him in action, not shooting people, but in just target practice. He could shoot with either hand and was very, very accurate.

At any rate, they were all armed. And over in Contra Estaca they shot and killed seven workers, and three of the detectives were shot and killed. They had a terrible uproar over it there. At Tayoltita they went on a strike in January over this, over the hiring of the detectives. The strike was immediately declared an illegal strike by the Mexican labor authorities, so they went back to work after two days, I think. They gained very little out of the strike. It was obvious that the presence of the detectives was onerous. But the situation had gotten to the point where even the governor of the state--although I don't think he was involved in getting any money out of it, he had been at least either paid off or in some way gotten to just ignore the situation and not intervene and not respond to any of the company requests for help.

The worst of it was at nighttime, the nighttime supervisors that were honest were almost afraid to go to work because things were so bad. One such shift boss from the mill disappeared one

day. He was working on the graveyard shift and he just disappeared and wasn't seen for three or four days. They finally found him hung from a cactus tree, a pitahaya. So the Americans there kidded themselves, saying we were living under the law of the pitahaya tree.

At any rate, in the midst of all this, in the upper part of the mine in what we called the San Luis Mine, we ran into a very high-grade spot; higher than normal grade. The grade was probably running well over $1,000 per ton. As a matter of fact, as I remember, some assays were as high as $1,600 per ton of ore, whereas the average ore might have been $50 to $80 per ton. So this is an exceedingly high-grade spot, and the men in that stope just weren't getting any work done. They were spending all their time highgrading.

So the manager finally decided that the best thing to do was to concentrate on getting that particular stope mined out. We took all the detectives and American staff and on a round-the-clock basis we were assigned to watching the different parts of the operation. We had two men inside the stope watching the miners. And we operated it eight hours per shift, three shifts a day. Then I was assigned to the level underneath the stope, to watch the chute puller who pulled the ore out of the stope into a one-ton car and trammed it about 200 feet to a dumping point where he dumped it down a vertical ore pass, 1,300 feet vertical distance down to the main haulage level. I just traipsed back and forth with him all day long, and it was really very boring. It got to be very boring.

Chall: You got a lot of exercise!

Swent: I would help him out. I think I got too close to him the first day, because I developed a big batch of fleas. We got along pretty well--Mexicans are real funny. They have a strange sense of humor in many ways, and after two or three days he began singing on the job. One of the popular songs at the time--I forget the title of the song, but one of the lines of it was, "Cuando me lo quita?" which is, "When will they take him away from me?" I laughed and assumed this meant me, and he kept singing this song all day long.

Chall: And those actually were the lines of a popular song at that time?

Swent: Yes.

Chall: He certainly picked up the right one for you! [Chuckles]

Swent: Yes, well, I assumed it was on purpose. [Laughter]

Chall: I would assume so, too.

Swent: At any rate, this went on for about a week or ten days, until we finally got this high-grade spot mined out. We figured well over $100,000 worth of ore was mined and shipped to the mill in that time. And it was guarded every inch of the way. I followed it to where it was dumped down this ore pass. Then on the main haulage level we had other people watching the drawing of the ore into the main ore train. They rode the ore train out to the surface where it was dumped into the ore bins. Then we had people stationed at the ore bins. There was a crushing plant below them, and then it was crushed and poured into a fine ore bin and loaded into a tramway that carried it all the way down to the mill, down at Tayoltita. Then again we had people watching the arrival of the tramway buckets. So it was watched all the way.

Chall: Could the mill handle all that was coming down so rapidly?

Swent: Well, there were ore bins, of course, at the mill, and there was a certain amount of surge there, capacity. But as far as handling it, it was just a question of raising the amount of cyanide to handle the additional precious metals content.

Chall: I was wondering whether anything could have been stolen while it was waiting its turn at the mill.

Swent: Well, I assume there probably was some. This is where the shift boss that was hung had worked, at the mill. It was a scary situation, and a very exciting one. I certainly enjoyed it.

Chall: Did this carefully supervised operation actually control the highgrading at that time?

Swent: I think we prevented some very serious losses that repaid the expense of the special operation many times over.

In addition to all this in those few months there, I spent a lot of time developing and getting my pictures printed from the trip, and exchanging them with Phil Klauber and Vernon Gustafson and Harry Peterson, who had been on the trip with me.

Chall: Did you do your own darkroom work, developing?

Swent: No, I sent most of it out to Mazatlan by plane--it came back and forth--a place called American Photo Supply that was an Eastman subsidiary. Later I took to doing my own developing and printing, but at that time I didn't have the facilities to do it very fast. I had many rolls of pictures that I wanted to get out.

As I say, we went back and forth to Guanacevi several times. Guanacevi by this time was in operation. When I had worked there

previously we were just getting it into operation. And we were doing the geological mapping up there also. Rodgers Peale was doing it in both places.

Graduate School of Mines, University of California at Berkeley, 1939-1940

Swent: At any rate, somewhere along in the late summer I went out and went back to San Francisco, getting ready to go to Berkeley. I went to the mining school at U.C. Berkeley in the fall. That was the fall of 1939. I spent the scholastic year of '39-'40 there, took several courses. I took a course on ventilation under Professor Wally Weeks; and a course in mine cost accounting under a professor Lester Uren; a course in metallurgy under a Professor Duschak; and a course in general mining economics and history under the dean, Professor Frank Probert, who is very famous and was the one who had built up the department. This was his last year; he retired at the end of the year. I enjoyed him very much. I enjoyed all of them; they were all good teachers.

Chall: You were really getting into some of the fine points of mining, then, as a career, taking classes like this.

Swent: Yes. This was more specialized. I had had some mining courses at Stanford, but this was a little bit more specialized. I also took a course in the chemistry department in physical chemistry as a preparation, really, for geology, which I was going to study the following year at Harvard.

Summer Job: Dust Surveys Around Kaiser Cement Plant

Swent: Then at the end of the year, in the summertime, Professor Duschak approached me and asked if I was interested in a job doing some dust surveys at the newly-opened Kaiser cement plant in Los Altos. I eventually took that job. What that involved was with the new plant that Henry J. Kaiser had built to produce cement. He had been a concrete supplier and been in the construction business and was one of the venturers in the Hoover Dam construction. But he didn't have his own source of cement.

In 1939, I guess, or maybe a little earlier, the navy asked for bids for the supplying of cement for some work that they were doing in Pearl Harbor. Even though he didn't have a cement plant,

Kaiser bid on it and was the low bidder. This really infuriated the cement industry, that they would award this to somebody who didn't have a cement plant. But he was awarded the contract. Then he took the contract to the Reconstruction Finance Corporation and borrowed the money to build the plant. This infuriated the cement industry even more. But he built this plant and it was just beginning operation at the time that I went to work there. It had been in operation a few months.

They had a very tall stack and a very efficient Cottrell precipitator at the head of the rotary kiln to precipitate the dust. And it was very efficient. You couldn't see anything coming out of that stack; it worked beautifully.

My job was to open up a series of stations at a mile radius around the stack and take readings with an instrument called a konimeter, and then count these readings and see what the dust counts were. It was very puzzling because, as I said, the Cottrell was doing a very efficient job, but some of my stations were in orchards around there, and you could see lots of dust on the leaves of the trees. But my readings initially didn't show anything abnormal. They were all fairly dust-free. Getting paths to these various stations was quite a job. We had to survey them in and everything and cut paths through brush and things. We encountered quite a few rattlesnakes. This was probably the most I was ever involved with rattlesnakes in my life. I came very close to a couple of them, but no bites, fortunately.

Chall: This was all around Los Altos, where it's hilly?

Swent: Yes.

Chall: Why were you checking for dust? Was there some kind of a regulation with respect to dust, as there might be today?

Swent: No. But the farmers, the people that owned the orchards around there, were complaining that they were getting the dust. I could see it on the leaves, as I said, but I couldn't detect it in the air. I started out doing this on day shift. I did several weeks on day shift and got nothing. Then I shifted to the afternoon shift, which would be from 4:00 or 5:00 in the afternoon to midnight, and did my patrolling at that time. I did that for several weeks and I still got nothing. Then later in the summer I shifted to graveyard shift. At first I got nothing, and then one night around 2:00 or 3:00 in the morning I just got a tremendous count. So I began investigating to find out why.

This led to really quite a situation there. The Cottrell plant, as I said, worked very efficiently. But it would get filled

up with dust, and something had to be done with the dust. The original plan had been to load this dust into trucks and take it down and dump it in the bay. The bay was several miles away, and this represented a significant cost. So apparently the manager of that Cottrell plant decided that was a useless expense, and he put in a pipeline to just blow the dust from out of the precipitator into a side canyon that was up behind the Cottrell plant. They would do this at graveyard shift maybe once a month, or every few weeks, anyway. But what happened was that most of the dust, of course, just settled right there where it was blown. But it made a terrific cloud that went all over. This was what I had detected. Of course, they had to stop this and find a better way of disposing of it. Professor Duschak, who was a consultant for Kaiser, was very upset when this all developed. But he reported it back to Henry J., and they did change it.

One of the things I should mention is, this was a terrible summer for me, because one of the hazards, in addition to the rattlesnakes, was poison oak. I had never had any experience with poison oak. But I just got so absolutely swollen all over. I had never had such misery.

Chall: There wasn't much to take care of it in those days.

Swent: No. You just put calamine lotion on you, and that was about all you could do. There were no shots at that time.

Another interesting incident that happened there. This was the only time I ever saw Henry J. Kaiser--

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The first shipment of cement arrived in Pearl Harbor while I was there. When it arrived in Pearl Harbor the navy, of course, took samples of it and tested it. It didn't meet specifications. So they rejected the shipment. So then Henry J. came down and he really raised Cain around the place. The man was a dynamo, really very energetic, and he just really raised Cain with the staff there and cracked the whip. I witnessed several of the meetings that he had with staff and the way he ripped them up and down and bawled them out. But anyway, they eventually got it all straightened out and the cement was accepted.

Chall: Can you give me, just for the history of it--what did they finally decide to do with the dust, to dispose of the dust?

Swent: I don't remember, frankly, because that was settled after I quit. This was just a summer job, three months. I found the results and

then they had to figure out what to do with it. I wasn't even there when they got it solved.

Chall: I see. But it was a fascinating experience, wasn't it?

Swent: Yes.

Graduate School of Geology, Harvard University, 1940-1941

Swent: Then in that fall I went out East to Harvard and enrolled in the geology school there under, more or less, the personal guidance of Dr. McLaughlin. He helped me select my courses. I took four courses; actually five, but two of them were rated as a half-course. One was a mineralogy course under Professor Lormelius Hurlbut. Another one was a petrology course, which is the microscopic study of rocks--or that's what it involved--under a Professor Larsen. Another one was a course on ore deposition under Professor Waldemar Lindgren. A fourth one was a course on ore occurrences under Dr. Donald McLaughlin. Let's see, there's a fifth half-course that I'm trying to remember. I think it was just the second half of the petrology course. It was divided into two separate courses, one half-year each. But it was just a continuation. One was just an indoctrination part of it, and the other was much more serious work.

I did very well in all these courses; I enjoyed the work very much. These professors were virtually all of world-wide renown. Lindgren was a world-famous authority on ore deposition and a marvelous lecturer. McLaughlin was the same way, although he had achieved his reputation later than Lindgren. Lindgren had a long, long history of achievement. Then Larsen was rather elderly, and he typified the absent-minded professor. But he certainly knew his subject. He lectured from a loose-leaf ring binder; he had his notes in that and he lectured from them. He gesticulated with his hands a lot, and one day in mid-subject one of his motions he knocked this binder off the lectern and onto the floor. It sprang open and spilled the pages out, so he picked them up and put them back in. But apparently when he put it back on the lectern it was open to a different page from where he had been at the moment he knocked it off, and he just went right off into the new subject to which it was open and didn't bat an eye! [laughter]

At any rate, we had a number of field trips that were very interesting. They were in connection with structural geology. They weren't in connection with ore deposition because there

weren't any ores around New England. But we did go out to see geological structure.

Chall: Just in the general area of Boston or New England?

Swent: Well, we went down into Pennsylvania. During some of the vacation periods we would go on these longer trips. Some of them were just around the Massachusetts area. Then in June when the end of the year came the faculty there, particularly Professor Hurlbut, who was the youngest of them, wanted me very much to come back and pursue a master's in geology. But I wasn't too keen on coming back. This was now into the middle of '41, and my draft board in San Francisco was beginning to make noises that I had to keep in touch with them and let them know where I was going and this sort of thing.

So I went back to San Francisco where my folks were living, and we decided that I would apply for a commission in the navy. They had a very good friend of my father's, Selim Woodworth, who was particularly friendly with Dad. He was a member of a firm called Hamilton, Beauchamp, and Woodworth, who were consulting metallurgists in San Francisco. San Luis Mining Company had used their services in Tayoltita, and the one who went down there most of the time was Mr. Woodworth. I never met Hamilton or Beauchamp. They were British, and I think by the time I got into the picture, Hamilton had died. Beauchamp never came to Tayoltita and I never met him.

At any rate, they were foremost metallurgists. Hamilton had written one of the early texts on the cyanide process. It's still considered a classic book. It was very short, very brief, but had all the chemical reactions and equations that were needed, and lots of practical advice based on the early cyanide plants, the first ones that were built. You see, the cyanide process was developed in the late 1890s. Up until then, particularly gold recovery had been accomplished by gravity methods and amalgamation. The cyanide process was a tremendous breakthrough and it improved recoveries greatly.

At any rate, Woodworth came from a family with a long navy connection. I think his grandfather had been in the navy, and his father. Woodworth was in the naval reserve and had been in it for many years, and had a captain's rating, a four-striper. He was already on active duty in June of '41.

He was working in the District Intelligence Office for the Twelfth Naval District, which is based in San Francisco. And he had suggested to Dad that he could get me a job as a commissioned officer in that office, in an engineering application. So I went

down and met with Woodworth and discussed it at great length and finally decided that that was a good idea and I would apply for it. So I did. He said it would take many months. Being an intelligence office appointment, why, I would have to be investigated by the FBI, and that it would take longer than normal to get the commission approved. He said it would be probably six months anyway. In the meantime, if I wanted, I could work as a civilian agent. They had funds which they could use to hire civilians. So it took a couple of months, maybe, to work all of this out.

Summer Work Developing the New Haulage Tunnel

Swent: In the meantime I did a little work for San Luis Mining Company. They had decided to drive a new haulage level. The haulage level that had been used during my lifetime, so to speak, had been the 10-level of the Arana Mine. In the early days there had been a haulage level in the San Luis Mine, which is a higher mine in the mountain. And there had been a tramway which took the ore from the haulage level, the 10-level of the San Luis Mine, down to the 10-level of the Arana Mine, and then the two ores were joined there, mixed. But in later years the mines had been connected internally, underground, and the ore was dropped all the way through the mine down to the 10-level Arana. The tramway between the two was dismantled.

But at any rate, the company decided to drive a new haulage level, 500 feet below the Arana 10-level. So this would be the Arana 15-level. But as you go down the mountainside there, of course, it's like going down the outside of a pyramid. To go into the center it gets further and further away. The new haulage level was going to be a very long one, and they wanted to use some modern methods to drive it.

One of the companies that my dad was involved with was basically one of the remnants of the Hearst, Haggin, and Tevis mines in Idaho, a base metal mine. The mine itself was called the Triumph mine. The company was the Ivanhoe Mining Company. They had a mine in a little place called Ketchum. The nearest town to Ketchum was Hailey, Idaho. This was just maybe five miles from Sun Valley. They were driving a long haulage level up there, and Dad wanted me to go up and study their methods in detail. Apparently they were making very good progress, and Dad thought the methods would be applicable to driving this haulage level in Tayoltita.

So Dad sent me up there to spend a couple of weeks studying their methods and write it up and make any drawings that were needed. They had developed what they called a jumbo, which was a rail-mounted frame on which they mounted the drills. And they used four drills to drill out the face. There were a lot of specialized techniques involved. There was also a method of switching the cars. One of the problems when you're driving a single track tunnel or level and you're using a mechanical loader or mucking machine with a car attached to it is the switching of cars. The mechanical loader--it's like what we call today a front-end loader --it dips into the ore pile or the rock pile and gets a bucket full of broken rock. Then it raises it and throws it over the so-called mucking machine and into the car attached to it. But it will only throw it a limited distance, and the distance is generally just far enough to load a single car. A normal blast will break a number of carloads of rock--eight, ten, fifteen carloads of rock, depending on the size of the cars. So the problem is, once that car is filled it's very time-consuming to push the car all the way out to surface and then get another car and come back in. Mucking machines are not good locomotives. They're not made to push cars around very far.

So they developed a number of different means of switching cars near the face. One was called a cherry picker, which was really a method whereby you would suspend devices from the roof for lifting a car. It would lift the car up and then an empty car would be pushed under it and to the front of it, and then the loaded car would be lowered back down on the track. This first loaded car would become the beginning of a loaded train. Another one was what they called a California switch. To use a California switch, periodically you had to enlarge the cross-section of the tunnel, and you put in a specialized switch which allowed you to push the loaded car off onto this switch. Then the mucking machine could pick up another empty car and bypass the loaded car. Then while the empty car was being filled by the mucking machine, the full car was pushed back, again, to a train that would eventually be a string of loaded cars. The technique was, in either case, to have enough empty cars present so that you could load all the rock broken by the blast. Then the crew could drill and blast again.

The objective was to try to achieve a complete cycle each shift. The complete cycle consisted of loading the broken rock from the previous blast, then setting up the drilling equipment, drilling enough holes for another blast, and removing the drilling equipment, loading the holes with dynamite, and, at the end of the shift, blasting these when the crew left. And then the next shift would come in and they would have a round of broken rock to begin on and repeat the cycle. It required everything to work just right in order to get each cycle finished. If for some reason you didn't

finish the cycle, you ran into all sorts of delays, because of the ventilation requirements after blasting. You had to leave some time between shifts in order to ventilate. And this was already scheduled by staggering the shift hours. If you missed your cycle, that meant that you had to take the ventilation time during shift, and you were paying people for sitting around, essentially doing nothing.

Chall: How did they test ventilation in those days? They didn't use a canary, I'm sure.

Swent: No, no, in hard rock mining they don't normally do that. The canary business was used a great deal in coal where there was methane. There is no methane present, generally, in hard rock mines.

Chall: Just dust?

Swent: Once in a while they would test for oxygen content, but that's very unusual. Most of the time it was just visibility and the presence of the blasting fumes, which were very noticeable. You could smell those. Generally a half-hour or an hour of good ventilation would be enough, depending on how efficiently you applied the ventilation air. What you didn't get rid of was the smell of the explosives. Some of the explosives gases would be confined to the pile of broken rock. As it was shoveled out this gas would come out of the rock pile. Sometimes it was objectionable. If there was too much of it, it would give people severe headaches, what they called "powder headaches." You also got that if you spent too much time loading dynamite; the vapors from the gelatin affect your head.

Chall: Did the men wear masks down there?

Swent: No, not usually, the respirators.

Chall: I was just thinking of all the dust that would be--

Swent: Yes. Well, usually the dust was pretty well gone by the time they came in to muck out. People object to wearing respirators. They don't like them. They're hot and uncomfortable. They are necessary under some conditions, but normally they would wet the pile of broken rock down with water to settle the dust. That was the first thing you did when you came in, was wet it down. The next thing you did was look around to see if there was any loose rock hanging overhead before you ventured out into the recently blasted area. You barred that rock down.

At any rate, this was about a two- or three-week's job. But I got all the dimensions of the jumbo and all the techniques and

wrote them up. I talked a lot with the men on this particular crew and got their recommendations as to whether a California switch or a cherry picker was better. I wrote up a report and sent it to San Luis and sent the drawings to them so that they could begin their tunnel job in Mexico. And there were some improvements that the men pointed out could be made in the jumbo, and I incorporated those.

Then I went back to San Francisco and kept on working for San Luis. They had a batch of cost data that had been accumulated for many years, and they wanted these charted. They had tables of the costs by various categories: production, the amount of ore reserves, and all this sort of thing. But they wanted a set of charts set up which would then be maintained year by year, showing the trends in these various costs. In those days this was all done by hand, so I drew these charts up. That took several weeks doing that.

In the meantime I just lived in San Francisco. We had two or three college classmates there. One was Jack Calderwood, who was a classmate at Stanford and was on the basketball team there in the days of Hank Luisetti. They were conference and national champions. Another one was John Dern, who had lived in the room underneath me in my freshman year at Encina Hall. Another fellow that we palled around a lot with was Ralph Keating, who had had polio and had a bad leg, and was in the Merchant Marine. The four of us did a lot of driving around California on the weekends. We went up to Mt. Lassen, and to the Modoc lava fields, and several expeditions of this nature on long weekends. On Labor Day John Dern and I went over to Bishop and Lone Pine and climbed Mt. Whitney. We carried sleeping bags and we slept on the top. It got quite cold up there that night. Then we dashed down the next morning and got in our car and drove over to Death Valley and then spent the next night at Bad Water, which was the lowest point in the U.S., 250 feet or so below sea level. So we spent one night at the highest point in the U.S. and the second night at the lowest point.

Checking Out Dry Lagoon Beds in Baja California for Naval Intelligence

Swent: That was Labor Day and the end of the summer. At this point the Navy Intelligence Office was beginning to get curious about some old dry lagoon beds in Baja California. They were very isolated; there wasn't very much known about them. There was no real good road down into Baja California at that time. There were these huge

lagoon beds, dry, that they thought might be used by small aircraft. They thought possibly that the Japanese might be using these for getting aircraft into lower California and hiding them there prior to--of course, by then it was really obvious that there was going to be a war with Japan. So they wanted to find out what was going on at these places.

So Woodworth arranged with Dad to have me go there. The way the arrangement worked out was, San Luis had been offered some gold placer properties in the lower end of Baja California, south of La Paz. They had hired a consulting geologist named Vaupell from the firm of Vaupell and Garcia in Mexico City to go over and investigate the property. I was to go as his assistant. So I drove down from San Francisco to Mexico City with my mother. My dad was in Mexico City at that time. So we drove down; it took about a week, I guess, to get there.

Chall: That's a long drive.

Swent: Yes. It was an interesting drive; I'd never made it before. Then I went up to Mazatlan and met Vaupell. He and I took a ship across from Mazatlan to La Paz. We engaged a truck and a truck driver and made up a Long Tom rocker and bought a bunch of supplies, food and things. We had sleeping bags and camping equipment, and we drove down south of La Paz to the area that had been offered.

The exploration technique was to sink pits through the various gravels and then sample the pits and take the samples, which were fairly bulky, and wash them through the rocker. Then collect the concentrates from the riffles and amalgamate them. When we did this, we used a known amount of mercury. We could weigh it beforehand and then weigh it afterwards and we would know how much gold or silver it had picked up. This was just a very rough method. Later we could take these and have them chemically analyzed.

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On occasions I would be able to borrow the truck and the truck driver. We were just inland a fair way, in the middle of the peninsula, and these dry lagoon beds were over on the west coast of Baja. Anyway, we drove over and drove around on some of these lagoon beds. We saw absolutely no signs of any aircraft or any other kind of vehicles at all. They were extremely isolated; nothing there at all.

So finally when the job came to an end I took a boat back from La Paz to Topolobampo, which is on the mainland north of Mazatlan. It's a little port on the mainland side of the Gulf of Lower

California. From there I was able to take a train up to Nogales on the main line of the railroad and get back to San Francisco, where I wrote a report to the navy on this.

Civilian Agent, San Francisco Intelligence Office, U.S. Navy

Swent: Then I went to work right away as a civilian agent in the San Francisco District Intelligence Office in what was known as the Internal Security Office of the naval district. The Internal Security Office had the assigned job of checking all plants with naval contracts in the Twelfth Naval District and naval installations as well for what we called internal security. This was, first of all, security of the information that the plants might be using for design of whatever they were producing. For instance, one place that we did was a torpedo tube plant. They had all kinds of information on the design and parts of torpedoes and torpedo tubes.

Chall: What did you have to do? Make sure that this was secure information?

Swent: Yes.

Chall: Did you have to train the management on security?

Swent: Well, yes, if they didn't know it already. We were primarily to check them. The contracting agency was supposed to train them, and we were sort of a checking agency to see that it was being done right. As I say, we checked both naval contractors and navy facilities, because the navy facilities also had security problems. We would check them for such things as not only security of information, but also against disasters such as fires and safety protection against sabotage and employment of aliens and that sort of thing.

It was a very standardized thing. The army did the same thing; they had their equivalent group that examined army contractors. Then the Merchant Marine did the same thing for people with Merchant Marine contracts. They used the FBI for that. So all three agencies were doing the same thing. Some of these plants had navy contracts, maritime commission contracts, and army contracts. So they would get hit three times. This was a real mess, and I didn't like it very much once I got into it. At first it was kind of interesting. I went in on one, I remember, and found out that the FBI had just finished a survey there the week before. Their surveys were identical; they were doing the same thing. They would make them available to us.

So I asked the commanding officer if I couldn't just use the FBI report--this was a Captain Osborne--and he thought it made sense, but he said he'd have to check it. And he checked with Washington and it came back from Washington, no, the navy had to do its own survey. Well, this was kind of discouraging, of course. I felt very guilty taking all these people's time. It took the contractor's time to do this, and to put them through it repeatedly like this seemed to me to be a real waste of their time and talents.

At any rate, I felt very guilty in some cases about doing this. In other cases I didn't. Bethlehem Steel Corporation shipyard--I drew that one, and that was a real fiasco. They needed it; they needed it very badly. They had all kinds of problems. Labor relations were terrible, and they had all kinds of aliens on their payroll. They had no control of their labor. And they had a big bottleneck, I found, in their water system for firefighting. At any rate, it wasn't well managed, and this became very evident. They had expanded extremely fast, from just a few hundred employees up to something like 17,000 at the time that I inspected.

At any rate, after a few months of this--well, I started this work in October of 1941 as a civilian agent, and Pearl Harbor came while I was still a civilian agent. I was sound asleep in the morning when it came out on the radio up at home. My folks had arrived, come up from Mexico by then. They woke me up and told me what they'd heard on the radio, so I got dressed and went down to the district intelligence office. There really wasn't much to do, but it was very interesting to be there, because it was the intelligence office. Lots of information came through there. Before the day was over I knew pretty well what the damage at Pearl Harbor was, which was not public information at the time. It was very depressing.

Chall: Was it also frightening? Did the officers around feel somewhat threatened?

Swent: Well, no. Of course, over the next few weeks there was a lot of fear of attacks on the West Coast. In fact, one ship was attacked just thirty-three miles south of the Farallones by a Japanese submarine. And, of course, this was not really given out to the public, but we got the reports on it there. A convoy coming in from Hawaii, including the Lurline, were delayed eight hours getting in because of this attack. There were lots of little things like this that came out and which I was able to at least know about. I wasn't involved in them, because I was off on this internal security business.

IV WORLD WAR II

Commissioned an Ensign: U.S. Naval Reserve, 1941

Swent: In mid-December my commission came through and I became an ensign in the U.S. Naval Reserve with a classification called IVS. That meant Intelligence Volunteer Special. So as soon as I got the commission and was sworn in, I had to go get a uniform. I ordered that at a tailor who was just a few blocks away.

The District Intelligence Office was at 717 Market Street, and it was an eight- or ten-story building. The navy had taken over several of the upper stories. It was ridiculous. You would go up in an elevator, and they were trying to recreate a nautical atmosphere, a shipboard atmosphere. When a uniformed navy person goes on board a navy vessel, when you step on board you turn to the quarterdeck and salute the flag. Generally there is an officer of the deck there whom you also salute. Well, when you got off the elevator on whatever floor it was there--I've forgotten--they had a flag, and they acted as if that was a quarterdeck, and you had to salute this flag as if you were going on board a ship. Each floor was referred to as a "deck"--like "up to the fifth deck."

Some of the things that went on there were very interesting. We had some men who were really deep into the intelligence business and who managed to get the Japanese merchant ship code. Actually this was before Pearl Harbor happened. A man named Stockdale went on board a Japanese merchant ship that was in the harbor in San Francisco in October as a civilian. He wandered around as if he were an unloading crew member, and located where they had the codes. He managed to throw the code books into a gunnysack and just walk off with them as if the sack were a load of material being unloaded. They duplicated them and then he took them back, and managed to sneak them back on board the ship. The supposition was that they didn't even miss them, because they didn't need them during the day, and they kept on using the code.

But my work got kind of monotonous and I wasn't very interested in it. These problems with the other services and duplicating and everything--I just felt like a government inspector and not a part of the navy. I got very disenchanted with it.

So, I guess around late March or early April of 1942, there was a circular letter that went out to all the navy everywhere, commanding all shore installations to forward favorably all applications for sea duty to the Navy Department in Washington. In other words it was a command to them that they had to approve these requests. So I volunteered under that; I volunteered for sea duty. It took a few weeks to get it cleared through the Twelfth Naval District, but they had no choice. They were supposed to forward all these requests.

It finally cleared the Twelfth Naval District, and in May I got orders to report to a training school in Chicago at Northwestern University. Up till then the navy at Northwestern had had what they called the Ninety-Day Wonders. It was a three-month course for people who were aspiring to be officers. It was sort of like the army's Officer Candidate School. But the school that I was sent to, this was the first one of its type. It was only sixty days, and it was for people who were already commissioned, like I was, but who were going to go into sea duty and needed some preparation. So we studied navigation, seamanship, and a little bit of gunnery and fire control. Basically that was it; a number of different variations of those things. It was a very concentrated course. There were hundreds of us there. Most of them didn't have as much experience in the navy as I did. I had already had several months.

Chall: Even if it was up on the eighth floor, or whatever.

Swent: Yes, but you know, I had banged around. I should go back a little bit. One of the things that I did in the naval district was, one of the naval installations that I had to survey was the Hunter's Point Naval Drydock, which was commanded by a captain, a four-striper. He couldn't give me much attention; he wasn't very interested in all this. I had to report to him when I went there to do the job, and he didn't seem very interested. Of course, I was an ensign and quite a few ranks junior to him. He sort of gave me the back of his hand.

Well, a few days after I started this, the battleship Idaho came in for repairs. This was supposed to be secret; nobody was supposed to know about it. And it came in through the Golden Gate in the daytime and sailed around to Hunter's Point. When it came into the drydock there, there were just hundreds of people lined up on the hills behind, outside the drydock, to watch this battleship

come in. The captain got very upset over this, so he called for me and wanted to know how the information had gotten out and could I find out. I've forgotten what I told him; I might look it up. These are my wartime diaries here [points to a stack of bound papers on nearby chair]. But he was very upset. So I got some recognition anyway! [laughter]

Chall: I see! He knew you were the person to call. I would imagine that people seeing a battleship coming in in broad daylight wouldn't have to be told anything by anybody. It wouldn't have to be undercover at all; there it was.

Swent: No, I wouldn't think so, but he said they'd been up there for hours beforehand, and that this was what worried him.

Chall: So at Northwestern then, you were put through a very--

Swent: Yes, it was a very fast and very concentrated course, basically five days a week. We were free on the weekends. Then we had a little graduation ceremony. We started in May and the graduation was in mid-July; and oh boy, it was hot, really hot. Mother and Dad came out to the little graduation thing.

Then I was assigned to the amphibious forces, to report to Norfolk, Virginia. So I went down there. There were quite a few others from there who were assigned.

While my Mother and Dad were out there they met my roommates; I was in a room with ten other people. They met most of them. A lot of them were assigned to the Pacific. So Mother told all of those who were coming through San Francisco to be sure and call on them. They had an apartment in San Francisco. And a lot of them did, and when they went back and forth through San Francisco they would always call on her and Dad.

Training on Landing Craft Tanks

Swent: At any rate, I went to Norfolk and was assigned onto the navy transport, the Leonard Wood, for training in landing craft. And I was assigned to what they called LCTs--those were Landing Craft Tanks. But they didn't have any. So those of us who were assigned to LCTs were on board this transport with nothing to do. So they decided, well, they would train us on LCMs whenever there was time. But they already had people who were assigned to be trained on LCMs, and we just had to hang around and wait until there was a little spare time when they could take us on a run or two with these LCMs.

Chall: What's the "M" stand for?

Swent: The LCM was Landing Craft Medium. Then there was a third smaller one called the LCVP, which stood for Landing Craft Vehicle Personnel. Then the big ones were called LSTs. The LCTs to which I was assigned were approximately 112 feet long, I think, and would hold 180 tons of cargo or tanks. They were supposed to take six 30-ton tanks; that's what they were designed for. They had a ramp in the front and you were to go up on the beach and lower the ramp, and the tanks would run off the ramp onto the shore.

Chall: Yes, I've seen those in action in movies or pictures.

Swent: Then the LCMs were about fifty feet long. They had no living quarters. The LCTs had temporary living quarters on them for a crew of ten. And of course, the LSTs had permanent living quarters. The LCTs supposedly had temporary living quarters where, when you went on a short trip or something, you lived on board. But basically when you were in port, you were supposed to be based onshore. LCMs had no living quarters; they were too small. They just docked every night. In an invasion they were carried on board ships and were lowered overboard like a lifeboat. The LCVPs were lowered the same way. The LCVPs would carry a small vehicle and, I think, thirty-six people. The LCMs were for up to about fifty tons of vehicles, cargo or personnel.

At any rate, I got to beach a few LCMs over several weeks' time there. It was deadly. It was hot, hot, hot in August in the Chesapeake Bay. The air conditioning system on the transport didn't work very well; it was just terrible. And there was not much to do. They were waiting for LCTs to be built and delivered. On August 7, the trainee group was transferred to the navy transport Thomas Stone, a much newer ship.

On August 8, day the word went out that they wanted some volunteers to go to Great Lakes Naval Station near Chicago, just north of Chicago, to bring LCTs down. The request for volunteers was clearly for officers who knew piloting and boat handling. I had long since learned not to volunteer for much in the navy, but I was in an intolerable situation. So I volunteered for the LCT ferrying duty.

Chall: At least get them down where you could work.

Swent: Yes, and get out of this deadly hot tedium with nothing to do, just sit around and swelter in the transport. Most of the time we were anchored out in the bay. On weekends we would go into town. Sometimes we got lucky enough that we would tie up and could go ashore. And other times you didn't get to tie up. The ship was

anchored out but you could take a small boat in and then go ashore during the weekend.

At any rate, I volunteered. There were four of us; myself and three ensigns named Edwin P. Knox, Franklin C. Nevius, and Dale O. Morgan. Four officers and forty men. The crew of the LCT was supposed to be ten men. So they picked four of us officers who had volunteered and about forty men. All of them were apprentice seamen. Well, no, there were a couple of fellows in there that had some mechanical training; at least a little engine training, and some had electrical training, but no experience. All of them were brand new people; all of us, the whole forty-four. All of us were brand new. I was the senior officer. Most of these fellows had been at Tower Hall in Northwestern with me. But I, by virtue of having been in the district intelligence office first, I had a little seniority. I was the senior officer and I was in charge of taking this group from Norfolk by train up to Great Lakes and reporting to Great Lakes. We left the Stone late in the afternoon of August 9, spent the night in quarters ashore, and left for Great Lakes the afternoon of the tenth. We had last minute problems with our pay and health records. They had been mailed from the Leonard Wood to the Thomas Stone, where they had not yet been received. Without them we could not get paid! From there we were to be assigned to a place in Wisconsin called Manitowoc, where LCTs were being built. So we arrived at Great Lakes finally after not much in the way of adventure, except I lost my typewriter.

Chall: Oh, you took your typewriter with you?

Swent: I had a portable typewriter that I very faithfully carried with me all those days. A lot of this diary that I kept was typewritten. I kept a diary from shortly after Pearl Harbor until I got back from overseas in late 1944.

Chall: What made you do that? What impelled you to make a diary?

Swent: I started it shortly after Pearl Harbor. I realized I was getting information that wasn't public. This was very interesting to me, so I decided well, I'd better make notes of it. I started notes. And I had had some experience. When we went to Europe in 1938, Phil Klauber kept a diary. Later, after the trip, he circulated it for the rest of us to read. Of course, we were with him for several months, and every night he would do his writing and catch up and he'd ask questions, how was this and how was that. Then he would write in his diary. I found it was very interesting, and in fact I began keeping a log for part of that trip at the end when we separated in Venice until I left Europe. I relied on his log, because I knew I was going to get to see it later. But when we separated then I began keeping my own. I gave it up after the trip

was over. But then I went back to it when Pearl Harbor came along, and kept it all the way through then until I got back from overseas.

Chall: That's a real task to have assigned oneself. Now, of course, it has historical value.[1]

Swent: Well, there's a lot of detail in it. I don't know that it has much historical value in itself. But it at least reflects the conditions.

Chall: So you lost your typewriter--did you lose it, or was it stolen?

Swent: No, no, I lost it. I left it when we got on the local train in Chicago, to go to Great Lakes. When the train came in we had the 40 men lined up on the platform. They began getting on at both ends of a car. Knox counted those getting on at one end and I those on the other. Our total was thirty-nine, so we thought we had lost one and began to look for him. I forgot the typewriter was on the platform. We counted the men again on the car and all forty were present, so we must have miscounted! So I bought another one in Manitowoc after about a month. One could not buy a typewriter without a priority, which I didn't have. Finally a Manitowoc office equipment store had two men about to be drafted sell their portables to him. Being used, they weren't subject to priority procedures, so I bought one for fifty dollars. That one did me through the war.

Chall: You carried that with you overseas?

Swent: Yes. It took a lot of beating.

Then we got to Great Lakes Naval Station and reported there. They basically didn't know what to do with us. They had quarters for the enlisted men, so the enlisted men got put up. They had no quarters for the officers, the four of us, so we were told to go off the base and try to find someplace to stay. We had a per diem allowance.

Somebody directed us to a community called Highland Park, to the Bob O'Link Golf Club a little ways out of town. The word was that the club wanted to do something to help the war effort, and that they would put up officers. So we got to the club, and it was a magnificent place. This was in a northern suburb of Chicago,

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[1]These diaries have been deposited in the Hoover Institution on War, Revolution, and Peace at Stanford University, California, and the United States Naval Institute in Annapolis, Maryland.

actually. Very well-to-do, and a very, very luxurious country club. And yes, they would put us up for a dollar a day. So three of us stayed there. Knox had family nearby, so he stayed with his family. But three of us stayed there and had a great time.

One evening there we got to witness a poker game. These were people who came up from Chicago, they were business people in Chicago; fairly well along in years, all of them up in their sixties. The pot was fantastic, you know. Several hundred dollars per pot in the poker game. They wanted to know if we wanted to get in. On an ensign's salary we couldn't even afford one pot! [laughter] So we just watched. It was a fairly large room, and it had people circulating, a uniformed waiter there serving drinks to people and serving the drinks at the table where they played. They didn't have to get up to get the drinks or anything.

One fellow came in with his hat on and sat down to get into the game. I remember the attendant's name was Joe. The man sat down and Joe came over to see what he wanted for a drink, and he said, "Joe, take my hat off." He didn't even take his own hat off! So Joe took his hat off and hung it up for him. As I say, the pots were several hundred dollars. These were real top drawer business people from Chicago.

Chall: They were poker players?

Swent: I guess so, yes. Oh yes, they were real avid. I considered them to be the representatives of the robber barons of Chicago.

But it was very pleasant. We were there for, I guess, two weeks. We had to report back to the base every day to see if there was any news. Finally after nine days we were told to go on up to Manitowoc, that they would take us up there. Our new orders were that I was being sent up for ferry duty, the other three officers "for instruction" and one crew of ten men were being sent for ferry duty. The other thirty men remained at Great Lakes. So we all got organized again and went up.

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We reported to the superintendent of shipbuilding at the shipyard of the Manitowoc Shipbuilding Corporation. He was a Lieutenant Commander Weaver. So we four officers went in and reported to him. And he was really upset. He looked at our records and the ranks of the men we had, and, in essence, he said, "I just can't send you fellows out to navigate the Great Lakes with your experience. It would just be a fiasco." He wasn't very complimentary at all.

I tried to soften it up and I told him, well, at least I had engineering training and I knew what bearings were and that I could do the navigational work, I was sure, and that I wouldn't get lost. Well, that wasn't much consolation to him. He was also upset at the orders. Nevius, Knox and Morgan and the ten men had to report to him for "instruction." Mine did not say this.

Again, they didn't have any officers' quarters. They had places for the enlisted men, but they didn't have anything for the officers. So we stayed in a hotel. We still didn't have our pay records and couldn't get paid. At one point I telephoned him and had my folks telegraph me $100! We arranged to borrow $10 for each enlisted man from the chaplain at Great Lakes Naval Station. The records finally caught up with us after our first trip. They were building the LCTs in a shipyard in Manitowoc. They had a contract to build thirty-six of them, the numbers one through thirty-six. These were called LCT(5)s. The "5" is what they call the "mark number." In essence it's a model number. These were mark 5 LCTs. At that point I didn't know what the first four marks were, but they were building LCT(5)s here. Also submarines--this company had two contracts, and they were assembling submarine crews there also, for manning these submarines.

Chall: A busy place!

From Lake Michigan to New York City

Swent: What we were assigned to was to take LCTs when they were finished from the shipyard in Manitowoc, which is on northern Lake Michigan, north of Milwaukee, and take them through Lake Michigan up through the straits into Lake Huron, down Lake Huron through the Detroit River into Lake Erie, through Lake Erie to Buffalo, and then through what's called the New York State Barge Canal, which essentially is the old Erie Canal but improved, to the Hudson River and then down the Hudson River to New York, and then deliver these in New York. That was the assignment.

Chall: Well, you really did have to know something about getting out of there.

Swent: He told us to go get our quarters and he let us know what he was going to do, but he was really adamant that he couldn't send us out the way we had shown up. So what he did over a period of several days was to take some of the enlisted men that were being assembled for the submarine crews and who were experienced people and had had some previous experience in the navy, and mix them with our crews.

Then he assembled several officers, but he didn't have enough. He wanted us to double up on officers, so we would have an experienced officer go with us on the first trip. Then on the second trip we would go on separate boats, but following the experienced officer. Then after that we would see what would develop.

Chall: I see. It was assumed then that the forty of you were going to go back and forth and get all of these LCTs out of there.

Swent: Yes, right. He didn't have enough officers there to do this, so he was scrounging around to see where he could get some more experienced officers. He needed one for me, and he finally got a fellow who was teaching seamanship at the Naval Academy. He was a reservist, but had had eighteen years of merchant ship experience on the Great Lakes and was now teaching seamanship. His name was Milton Ryberg. He was a full lieutenant. So he had him assigned to do this duty, and he came up from Annapolis.

So we started out, Ryberg and this mixed crew. I didn't have all of the original ten men that I was assigned. They gave me five experienced men and five of the forty that we brought up. One LCT, the Number One, had already gone under a Lieutenant Magan. The next one to be completed would be the Number Four. The yard was building Nos. 1-36 under a contract with the navy.

Before it was turned over to us, the first thing we did was we cruised around on it when it was having its trials for the navy to accept it. After the navy accepted it, then we provisioned it. There was a strange arrangement for provisions on there. The men had a daily allowance for food. This was issued to them in money, and then I would collect the money from the men and commission whoever was our cook to go buy provisions. Ryberg spotted the cook, named Hauser, as an old drunk, so he wouldn't let me give him the money. He went to a grocery store to buy the provisions. When he was back on board with the provisions, I reimbursed him. There weren't any navy provisions or food there.

Anyway we provisioned LCT No. 4 for several days and started out, at 7:00 p.m. on August 25th. We cruised diagonally up across Lake Michigan heading for the straits. We went through the straits late the next afternoon. Then it got dark as we went down into Lake Huron. It got kind of stormy during the night. But there being two officers on board, we switched around and got a little sleep, each of us. I got some sleep during the early night, then stood a watch in the late night and early morning. I went back to sleep about 5:30 a.m. When I got up and went outside there was land on the wrong side.

So I checked our compass and everything, and it was land on the wrong side. We hadn't turned around or anything, there was just land on the wrong side of us. We had come out of the storm and it was nice and calm now. But we didn't know where we were. At first we thought we were on the north side of Lake Huron, way up on the Canadian side, but it became obvious that that wasn't the case, that the shoreline wasn't just what it should be for that. And as we cruised along, the land was on our port side or the left side of the craft.

Then we spotted a lighthouse. We were provided with a lighthouse list, which had a list of all the active lighthouses in it and a description of each one and the type and timing of the light emitted by each. So we tried to find this lighthouse in it, but it apparently was not an active one, since the light wasn't flashing anyway. Lighthouses are identified by--each lighthouse has a different type of beam that they put out. The interval of the beam changes. So I couldn't identify it on the light list.

So Ryberg said, "Well, you'll have to take the life raft and paddle ashore and find out where we are." It was cold; the water was very cold after this storm, and it was still overcast, so I didn't want to do this. The life raft was just one of these big donut rings with slats suspended in the middle on ropes, and you were down in the water. You were going to get wet and cold. And I said, "No, we don't have to do that." He said, "Well, what do you want to do?" I said, "You can just go beach this thing. This is a landing craft. You can run it up on the beach and go off and be dry." "Oh no," he said, "you can't do that. Anytime you touch bottom with a craft in the navy you have to make a report to the Bureau of Shipbuilding." I said, "I don't think so. I've beached these things--not these things, but smaller ones down in Norfolk." "No, no," he said, "we can't do that. We'll go in as close as we can, but I'm not going to touch bottom. Then you take the life raft in."

So I went back to the lighthouse book. It had an appendix in the back of it that had deactivated lighthouses in it. By then we were close enough to shore to see that the lighthouse was abandoned and there were no people visible that I could ask about our location. We backed off and cruised a little more and found the location to be a small island. And I finally found one in it that seemed to be our lighthouse. The fact that it was on an island confirmed it! We were getting close to shore; he was heading for shore with it, and he put guys out in front taking soundings and being sure that he wasn't going to touch bottom with the LCT bottom, and he was ready to drop the anchor at any time.

Chall: Where were you?

Swent: We were in Sturgeon Bay, at an island called Charity Island. Sturgeon Bay is a long, narrow bay on the south side of Lake Huron. It's sort of a little pocket off of Lake Huron. When you go into it, of course, if you're on the south side of it, you would have land on your port side. So that was it. So we turned and headed out and got back into Lake Huron and went on down.

When we got to Detroit our orders were to stop there to check the engines. The engines in these craft were General Motors Gray Marine Diesels. There were three of them, 1,500 horsepower each. The type that are used in trucks and everything else. At that time they were a fairly new development. The navy had an arrangement with General Motors that they would come down and check them when we went through Detroit and see that they were all right. At that time we were required to change the oil. It was about the right number of hours of operation. So that took several hours in Detroit.

Then we proceeded on down the Detroit River and into Lake Erie, then across Lake Erie. When we got to Buffalo we were to report at Tonawanda Island there. It's a little island in the beginning of the Niagara River. We were supposed to report into that and pick up a pilot to take us through the Barge Canal. Actually we were given two--Russ Coyne and Charles Eaton. Coyne was a magnificent pilot. He was an old-timer, had twenty years or more experience on the canal. He was just excellent. He knew every rock in that canal. We got into fog twice. The first time we tied up for several hours, but the second time he didn't want to stop. He went up in the bow of the LCT where he could see better. There were reflecting markers on the sides of the canal, just like there are on a road. And he knew every one of those markers and where he was from them. So he kept us going, relaying messages to the pilot house by telephone, at half-speed or less in the canal, but we kept going for a long time until going around a sharp bend we almost wound up crosswise in the canal. (It was 90 feet wide and the LCT 112 feet long.) Ryberg let him go on until we came to a good place to tie up--below a lock after we locked through.

There are sixty-four locks between Buffalo and Troy, New York, where the canal ends. We were one of the very first of many LCTs to go through. The Number One had gone through, and we were the fourth one. So they weren't too used to naval craft going through these locks, but we had priority over the normal barge traffic in the canal. So we went through fairly rapidly. But it took three days to go through.

From a pay phone at a lock in Amsterdam I called Phil Klauber, who was then working for General Electric in Schenectady, and arranged for him to visit me when we went through the lock at a

nearby town called Siotia. We had about an hour's visit, but Ryberg wouldn't let him on board!

Then when we got to Troy we dropped one pilot--Eaton. We had to phone the port director in New York and tell him that we were there and give him an estimated time of arrival in New York. We were to turn the landing craft in at Pier 45 in New York. So we docked for a few minutes at Troy, made the telephone call, then went on down the Hudson river. It was fairly uneventful on the way down to New York, but Ross Coyne stayed with us all the way, but it wasn't really necessary since the river was so big and wide compared to the canal. We stopped at Poughkeepsie where Ryberg's wife taught at Vassar. He telephoned her and she came down in their car and took him home to get some things he wanted. The cook, Hauser, and I went into town and bought food for another meal for the crew.

In going through the Barge Canal, one of the things we had to do was to pass a lot of low bridges. To get under them we had to take on a water ballast and weigh the landing craft down so that it sat further down in the water. This cut our speed down, but we had to do it to get under these bridges. Then when we got to the Hudson River we would pump the water out again. We usually made pretty good speed down the Hudson, because you were going with the current. Then we would pump out our ballast and get better speed. The landing craft were slow. At best they were doing six or seven knots, which is six or seven nautical miles per hour, which is very slow for ships and craft.

At any rate, we got to Pier 45 New York and turned it in. We saw LCT Nos. 2 and 3 tied up at the pier. We were asked for a lot of information that the Port Director's people requested on the trip. We had to have everything that was on board inventoried, and we were given a receipt for it. We put up in a hotel and made arrangements to take a train back to Chicago and then another train back up to Manitowoc.

Chall: I see. How many came down the first time? One and two--you were on the second one. You were with all those other forty--

Swent: Well, they each got the same thing.

Chall: They were following behind you?

Swent: Whenever there was another LCT completed. Sometimes it would be several days between completion times. It took eight days and three hours to do that first trip. When we got back we found that Lieutenant Commander Weaver had decided to set up a contest. He made up a little cup. He took just a little coffee mug and chipped

on it and then used his wife's red nail polish. And he called it "Spit Kid Sculler Championship." Magan had made the first trip down, so he had his name and time on it. Whoever broke Magan's record of four days, eighteen hours would get his name and time painted on the cup. Whoever among the first thirty-six LCTs made the fastest time was to keep the cup.

So Ryberg and I had--we didn't beat Magan on that one. But I got interested. In the second trip I was to go on a second LCT following Ryberg in another. I had my own boat then, but with a mixed crew still. The ratings were still mixed. Ryberg had LCT 9 and I took the 10. This trip took us eight days six hours. Now on that one, since we were just one officer on board each, we didn't get much sleep. I got a great deal of help from a chief bosun's mate named Peters. He had been on destroyer duty in the Atlantic. He was good at handling the crew and knew seamanship. We were up a great deal. Through the Great Lakes we could get sleep because we were not close to land.

There are all kinds of vessels plying Lake Huron. There was some hazard from all these vessels--the giant ore vessels coming up and down. They had a regular shipping lane there, divided into northbound and southbound lanes, and we were to go down the southbound lane. So as long as you stayed within the lanes it wasn't too bad. But you did pass a lot of shipping, and a lot of ships passed you, because we weren't going very fast. These great big ships would go plowing by and you had to be sure that you didn't endanger them, or they us.

At any rate, we got into the canal. Ryberg got his pilot and he went on into the canal, and then I picked up my pilot and I went into the canal. We were now limited to one pilot per LCT because LCTs from other shipyards were going through the canal also, and there was a shortage of them. But one of the problems on this second trip came with my pilot for the canal, Hartmann. When he came on board I asked him how long he had been on the canal. "Oh," he said, "I've been on the canal for twenty years." Great! Just like the pilot had on the first trip, I thought. We started out. The first part of the canal is what they call Tonawanda Creek. It's narrow; it's a creek that's just been enlarged somewhat to allow barge traffic. We were going around a great big long bend--you couldn't see around it, and we were going at our top speed. Both of us, the pilot and I, were on deck. It was still daylight, and we were just beginning the trip. We heard a tugboat whistle around the bend. We kept on going; the pilot didn't do anything. And I said, "Don't you think we ought to slow down a little bit? There's a tugboat whistling." "Oh, no," he said, "they're no problem here. We're all right."

So we kept going, and sure enough, we got around the bend and there was a bridge over the river with an abutment right in the middle of the creek, dividing it into two parts. Normally it was traffic to the right. Well, here was this tug coming through on the wrong side of that bridge. And we were heading right for it. We had to put it into reverse and try to stop and we kind of lost control and we banged the concrete abutment, but didn't hit the tug or any of its barges. We finally made our way through on the wrong side.

So when we got through I asked this guy--he obviously didn't know this was there. I said, "Well, what did you do on the canal for twenty years?" "Oh," he said, "I was a fireman." Well, a fireman is a below-decks job. He had had twenty years of experience, but he didn't know his way around the canal! So I thought, gee, I just can't leave this guy alone. So I didn't get any sleep all the way through the canal. I stayed on deck the whole time.

Chall: You probably knew the canal better than he did.

Swent: By then I did, yes.

Chall: Well, those are the hazards.

Swent: Right.

It was hard to stay together in the canal because of the locking arrangements, if Ryberg got into a lock that already had other craft in it. We got separated because they would lock through whatever it would take to fill the lock. At any rate, I was going through there on my own with a very good pilot named Hartmann. So I got some sleep. There were times when I figured I could go catch some sleep and leave him in charge, and that worked fine. Even so, we both lost a lot of sleep. When I finally went to bed in a New York hotel room that night it had been 130 hours since I had been to bed! I had managed to get a few catnaps in, however.

Ryberg and I went back to Manitowoc together, and we both had the same experience. When we got back to Manitowoc we had to stay in the same hotel room. We had a very difficult time sleeping. I kept getting up and going to the window and looking out and wondering how this landing craft had gotten aground, trying to figure it out. I was having real troubles sleeping. At one time both of us were at different windows, but we were both doing the same thing!

Chall: There was a lot of stress on that trip!

Swent: Yes, we lost a lot of sleep. Ryberg was then taken off ferry duty

and made operations officer under Weaver. I went on the third trip, and then I was on my own; I didn't have to follow anybody. I had the LCT 17. Knox and an older navy officer named Hoslup took the LCTs 15 and 16 out in Knox's second trip about from Manitowoc some thirty-six hours ahead of me. In spite of a six-hour delay in Lake Huron replacing our diesel generator engine's water pump, I caught up with them in Detroit. They had gotten into a bad storm and were badly damaged, so were replaced in Detroit.

When we got to Detroit, we had to change the oil. What we had done before, each time we got to Detroit, we shut all three engines down at the same time and drained them and changed the oil. I had a chief motor machinist, named Card, who had twenty-some-odd years in the navy. He had gold service stripes and all sorts of stuff on his uniform. I asked him if we couldn't change the oil by shutting one engine down at a time and keeping going with the other two. No, no, no, you couldn't do that! You had to shut all of them down. It was just too dangerous and too hot to work between these while they were going, all sorts of stuff.

So we took the time to shut them all down at once, and it took several hours to do this in Detroit. After the GM man checked us we went on. Even as it was, I remember that I did make a new record time--seven days and twelve hours. I got down to New York in good time. We had two pilots again, Fontaine and Curry--both better than Hartmann. We had no fog or other breakdown delays. And of course, the faster you made this trip, the less sleep you got. I had terrible times sleeping when I got off of it. I didn't have such a difficult time staying awake when I was on board. Back at Manitowoc, my name went on the Spit Kid Sculler cup, as I had beaten Magan's time by six hours.

[1][By virtue of having passed Haslup and Knox, when I got back to Manitowoc, our crew was sent out again immediately and ahead of them. My crew was upset over this as they got no time off in Manitowoc. Our next LCT was the 21. The first part of the trip was uneventful except for one incident in the St. Clair River in the dark. My steersman got into some conversation and drifted off course to the right hand side of the channel, marked by buoys. A big ship was just passing us on the other side, so we couldn't turn left too far. As a result, we ran over an unlighted can buoy and it damaged our center propeller so that it vibrated badly at high speeds. Our pilots this time were a young boy, about eighteen years old, named Morey Parrish, and an older man, about forty-five, named Purdue. Parrish was a whiz. He had already made five LCT trips. This was Purdue's first such trip. Parrish had developed a new technique for going through the narrow canal portions faster than we had before. We ran into some fog but Parrish kept us going

[1]The following paragraphs were added by Mr. Swent.

slowly for about twenty miles until the fog lifted. In one lock, something stuck in our port side propeller and every time we tried to start it, the engine would stall. I dove overboard and swam under the boat and found a large log lodged in the propeller. I got it out in a few seconds and we proceeded. We made this trip in a new record time--seven days two hours.

On the fifth trip, LCT-30, I had serious trouble with our cook, Hauser. He got the DT's when we were first in the canal. He got so bad I finally took him to a hospital in an ambulance in Oneida, New York, while going through a set of locks. I left Peters in charge and he kept the LCT going while I was ashore. While checking him in he went violent. The hospital had no facility for handling violent alcoholics, so they referred me to a state hospital in Marcy, New York, a few miles away. Had to leave Hauser there. Later I learned that he was transferred to a naval hospital in New York and finally discharged from the navy. I met the LCT at the next set of locks, so we lost no time. At the last lock I found out that Dale Morgan had gone through there with LCT-28 several hours ahead of my record on LCT-21, but that at this point I was ahead of his time. When we arrived in New York our time was six days eighteen hours--a scant two hours under Morgan's new record time.

On the sixth trip, I took LCT-36--the last one built at Manitowoc. Nevius and Morgan had gone in the 34 and 35 a day or so before me. I had a completely new crew--all but one being from the forty we had brought up from Norfolk! I lost Peters, but these boys were much more willing to work than the regular navy people we had mixed with our crews before. When we were arriving in Detroit I found they had changed lube oil in the engines by shutting down one at a time, the way Card had told me was impossible! Caught up with Morgan and Nevius, who had been delayed by bad weather, in Tonawanda. I drew Morey Parrish as a pilot again, and we made splendid time.

Although Morgan had no chance of breaking my last record, he and I virtually raced each other all the way from Tonawanda to New York. He later admitted to using higher engine speeds than authorized to pass me once and to stay ahead until we got to the Hudson River. Going down the river he oversped his engines and ran faster than I, but I took some short-cuts through shallow waters that I had developed on previous trips and managed to keep us together, and I was able to dock at Pier 45 a minute or so before him as he overshot the pier! I set a new and final record--six days twelve hours. When I got back to Manitowoc Commander Weaver mailed my cup home to my folks, and I still have it on my desk. I use it to keep pencils and pens.

I found out that Ryberg had requested to ferry some 300-foot long tanker ships being built on Lake Superior down the St.

Lawrence River. He had requested that Haslap, Weir and I from the LCT ferry crews be assigned to him, but nothing came of it. So this was the end of my ferry duty, and I was somewhat melancholy about it. I had liked the town of Manitowoc, the people, the fall colors and the LCT ferry work, and being able to prove myself to Weaver after his initial doubts.][1]

Chall: In retrospect, do you think you could have done the first one without the help that you had?

Swent: Oh, it would have been harder, but I think I could have made it, yes. I don't think the other fellows could have made it. They were, you know, English majors and that sort of thing. They didn't know anything about navigation or seamanship. The seamanship part of the course at Tower Hall had been very interesting, but it was mostly common sense.

Chall: Well, this took really piloting.

Swent: Yes, and the navigation part of it was no challenge to me, because I had already had surveying and studied shooting the sun and stars and that sort of thing; at least shooting Polaris to get a bearing or latitude. Most of this time we were dead reckoning and doing sighting on land points anyway.

Chall: Well, that was an interesting experience, nonetheless. It got you all seaworthy.

Swent: Yes, it was a tremendous amount of experience in the LCTs but no experience at all in beaching them. I still was at the point where, after six trips, I had never beached one.

Chall: Where did you learn how to do that?

Swent: In Africa.

Chall: Is that so? You mean they never taught you how to beach one while you were there?

Swent: Well, when I got through with the six trips, Nevius, Morgan and I were shipped to Buffalo to take LCTs from there to New York, but instead we were sent on to the port director in New York. They wanted to give us ten days leave and then assign us to guarding LCTs for two or three months until they were shipped overseas. Since ten days leave was too short to go home in, I didn't ask for it. After about two weeks we original four were sent down to Norfolk again. I had just been there six days, and I was given orders to go back to New York and report to Pier 45 to take the

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[1]End of added paragraphs.

place of an ensign named Downing who had been trained in LCTs. He had beached some and all that, and he had a crew there that had been trained. But he was sick, and they were being shipped overseas. They were in New York ready to ship out. And I was to go take his place because he couldn't go.

So I went back up there; never did get any training. The crew had it, but I didn't. I was assigned by the port director at Pier 45 to live at the receiving ship at Pier 92. So I wound up in New York at Pier 92 on December 7--one year after Pearl Harbor. There were quite a few crews there--I forget how many--at the time, waiting for a convoy to ship out. This was in early December of '42. We had ferried landing craft through the Great Lakes until we began to get freezing weather. In fact, the last trip we had lots of trouble with ice on the decks because the Lakes are fresh water and waves would get water over onto the deck and there it just froze flat. We had lots of trouble with icing, and very cold weather.

Of course, they close the shipping on those lakes during the wintertime. The giant ore ships can't go. So that was what ended the ferry business for the year.

Overseas

En Route to Algeria, 1943

[Date of Interview: September 25, 1987] ##

Chall: When we left off last time you were on your way--was it to Algeria?

Swent: Yes. I had been sent up from Norfolk with one-and-a-half hours notice to New York, arriving there on December 7, a year after Pearl Harbor, to take the place of an ensign in an LCT crew who was sick. But we didn't sail right away. In fact, after a few days I got a ten-day leave and returned to San Francisco for a few days. I had to be back on December 30th.

Chall: That was in 1943?

Swent: That was the New Year's Eve of December 31, '42-January 1, '43. We stuck around New York for three more months. [1][Most of the three and one-half months that I was in New York, I was frustrated by the seemingly endless delays in getting overseas. I was very anxious

[1]The following paragraphs were added by Mr. Swent.

to go, having volunteered for it virtually a year before we left. Officers for LSTs were scarce and I had several opportunities to transfer, but each time I thought that the additional training that I would be sent to would involve still more delay. One offer was to be the engineering officer on an LST, but I was reluctant to take this because the engineering officer's battle station is down in the engine room, where he can see nothing of what is going on, and I knew I wouldn't like it. I finally reluctantly decided to take it in order to get out of New York, but I had waited so long that the position was filled. I was not particularly disappointed.

Part of the Pier 45 Port Director's duties were to receive and repair and equip all the LCTs arriving in New York so that they were fully equipped and in good condition when turned over to the crews that were to man them overseas. His office also arranged for loading the LCTs on transports, liberty ships, and LSTs before crews were assigned to them.

The scenes at Piers 92 and 45 were ones of vast confusion, red tape, and disdain of the newly created amphibious forces by the regular navy establishment. Downing (the ensign whom I was replacing) had an LCT crew in Flotilla 9. (An LCT flotilla theoretically consisted of thirty-six LCTs each with an officer and ten men, plus a staff consisting of a flotilla commander, usually with rank of lieutenant commander, three group commanders (usually full lieutenants), a small office staff, a doctor, supply and pay officer, and several other staff officers. The group commanders each had charge of a group of twelve LCTs, divided into two divisions of six LCTs. The officers on the LCTs were called officers-in-charge (OinCs) to distinguish them from commanding officers. The only commanding officer was the flotilla commander. The senior officer of each division doubled as an OinC and division leader.)

The naval port director at Pier 45, Commander Capehart, had split the staff, officers, and crews of Flotilla 9 into several lodging groups. Some of us were at Pier 92, on the west side of Manhattan, while others were at the Brooklyn Navy Yard, and others at a naval facility at Long Beach, on Long Island. Another flotilla, 10, was also in New York, but most of them were at the Brooklyn Navy Yard or Long Beach.

For the enlisted men the navy had built several hundred bunks on Pier 92, as well as a mess hall, and a complete set of administrative offices. The officers were quartered on two decommissioned cruisers, the Seattle and the Camden, permanently tied up to the pier. I was given a stateroom on the Seattle (built in 1906). We had three meals a day served on board the ship in junior and senior officers messes. We had regular navy mess

attendants to wait on the tables and to clean the staterooms. Officers and men passing through the pier were required to help the permanent men and officers of the establishment (called "ship's company") in standing security watches around the pier about once a week.

The few LSTs that sailed in convoy out of New York were in poor shape. Most of them came back within twenty-four hours of their first sailing. The general trouble was a weak steering arrangement that often broke down in bad weather, and forced the crews to steer manually down inside the stern with order being relayed from the bridge.

Being in New York, I led a fairly busy social life. A lot of it revolved around my old Stanford friends Phil Klauber, John Dern and Jack Calderwood. Jack Calderwood trained in PT boats, and then was transferred to the Brooklyn Navy Yards to take over one to take overseas. He was going with a Stanford girl named Michael Drury, whom I had known on the Stanford Daily. She was working for Life magazine, some of her work being movie and play reviews, so she had access to many free tickets. Before he was shipped overseas to Australia they suddenly got married. At one point, John Dern and his brother Jim visited New York and we all visited Mike and Jack at the Brooklyn Navy Yard officers club. Phil Klauber still lived in Schenectady, and came to New York for occasional weekends. We got together a number of times, and I went to Schenectady one weekend. Michael Drury Calderwood served as a clearing house for all of us. She loved showing New York to visitors, including us and visiting friends, and we went to lots of shows and movies together.

The Queen Elizabeth, the British luxury liner changed into a troop transport, regularly docked at Pier 90, right next to us, so I saw her come and go several times. Normally it took ten tugs to dock her! The burned and turned over Normandie was at Pier 88, and I managed to get on the pier one day to see the wreckage and some of the salvage operations.

In early March, by means of an Alnav, I was promoted from ensign to lieutenant (Junior Grade--Lt.(jg)). An Alnav was an all navy communication and the method of promotion was to announce that as of a certain date all junior officers (below rank of commander) with dates of rank and active duty before dates named in the Alnav were automatically promoted one grade. This made $16 per month difference in my monthly salary! For several months I had been one of the most senior ensigns in the USNR because the previous Alnav had just missed me by a few days.

There were two methods of shipping the LCTs overseas. The LCTs were made up of three structurally separate units--bow, center, and stern, which were bolted together at the manufacturing shipyard with huge packings between sections to make the joints water tight and to allow some flexibility. One method of shipping an LCT was to unbolt the three sections and hoist them onto different portions of the deck of a transport or merchant cargo ship. At the destination, the sections were hoisted off, placed in the water, (they would each float independently), and then bolted together again. The second method was to build wooden launching ways on the decks of the LSTs (the only ships available that had enough open, flat deck space in which to carry a whole LCT). Then the LCTs would be hoisted on board using a huge crane, placed on the launching ways, and chained down to them and the deck securely. At the destination the LSTs would take on water ballast on one side to induce a list, and then the LCTs would be launched sideways into the water. This was the preferred method, as an LCT could be put into service much faster this way, and the destination did not have to have a huge crane.

On December 10th, six Flotilla 9 crews and a Lt. Williams, a group commander, a doctor, and a couple of other staff officers were shipped out using the sectionalized technique. I and the crew I had just taken over were supposed to be a part of this group, but we found that not all my men's records were complete, so we were not shipped out. Those of us remaining understood that their convoy was taking them to Casablanca in Africa, and that the rest of the flotilla would go there soon. After many weeks we began to get rumors that one of the officers, Ensign Cooper, from whom I had won $1.90 playing blackjack, had been listed as missing in action. Soon we saw the names of many of his crew members also listed as missing in action. A week or two later some returning personnel from the convoy told us that he had been on the ammunition ship Arthur Middleton. Two of the six crews had their ships sent on to Oran so they were not unloaded in Casablanca. The Middleton hit a mine six miles out of Oran and blew up, the only three survivors being three men who were at the railing at stern of the ship at the moment and were thrown overboard by the explosion. The LCT that Cooper had been assigned was the 21 that I ferried from Manitowoc!

When I came up from Norfolk and replaced Downing, the division he was in was headed by Ensign Roger Williams. I was senior to him, but he didn't want to give up the post without more confirmation of my position. The job at that time mainly involved being a conduit for distributing communications, notices, orders, etc. down to the individual OinCs of the division and to convey their requests and communications upwards. I did not push the matter, but one day Commander Capehart remarked in Roger's hearing that I was the senior officer and should be the division leader, so

Roger gracefully bowed out and allowed me to be the division leader without further question. The other members of the division besides Roger Williams were Ensigns Raymond Cluster, Harry Souchon, Dean Shervey and Don Woodard. Although later we were reassigned to other divisions, we got to be a close group at Pier 92. I am still in touch with all but Harry Souchon and Don Woodard, who have died.

About January 22 the Flotilla 9 commander and remaining staff and group commanders and about half the crews (but none of the Pier 92 ones) were transferred to Flotilla 6 and were to be ordered to San Francisco to go to the Pacific. All the flotilla's supplies that they had acquired went to Flotilla 6. It took a few days before I realized the full significance of this, but with our group commander (Lt. Williams) in Casablanca, and all other flotilla staff transferred to another flotilla, I was now the senior officer present for the eight officers and crews at Long Beach and the six at Pier 92, and, therefore, technically in charge of them all.

Towards the end of January I commenced a program for getting certain available training for our crews and officers, and requisitioning supplies that each flotilla was supposed to have, but which was supposed to be ordered by the flotilla commander.

The things that I got our men and officers into were such things as classes in aircraft identification (we had already heard a number of horror stories of our own warplanes being shot down by our own people), three weeks of classes in blinker and semaphore for several men in each crew (I took this course myself), having men supposed to be cooks in each crew assigned to the Pier 92 commissary to get kitchen experience, training in taking apart and reassembling the 0.45 caliber semi-automatic pistols officers would be issued, as well as the same with the 0.45 caliber Thompson sub-machine gun, and 20 mm. Oerlickon anti-aircraft guns that would be on the LCTs. I also arranged for men and officers to do target shooting and to be sent in small groups up to a gunnery school at Price's Neck, Rhode Island for practice in firing the 20 mm. Oerlickons at airborne towed targets and balloons using tracer bullet control. I also requisitioned winter gear for our crews--mittens, helmets, overshoes, down-lined pants and jackets, all by individual sizes.

I began to worry that we would be shipped overseas and be given a flotilla staff at the last minute that would not have time to obtain the allotted office equipment, and recreational and welfare materials that were authorized, so I requisitioned these. I was a little doubtful that they would be supplied because they were supposed to be requisitioned by a flotilla commander, but my requisition was accepted. Some of this material did not arrive

until after we were shipped out, but it was all forwarded to us in Africa by Capehart's staff.

We had sixty men in the six crews at Pier 92, and fifteen replacement men in case any of the sixty should be unable to leave when the time came. We began a program of giving each of these men three typhus shots, a yellow fever shot, and two cholera shots, and being sure that each shot was recorded in each man's health record. Before a man could be shipped overseas he must have his complete records with him--pay record, health record, and service record. After I checked the seventy-five, I found that only fifty-three had complete records, so we then began a campaign to locate the lost records (a very common occurrence because men could be moved within the U.S. without their records, and these mailed to them later). Also got identification cards and dog tags issued for all the men.

Pier 92 was a receiving unit for all branches of the navy that had men in transit through New York. There were usually hundreds of men billeted there, some for just a few days and others up to several months, like our group. Since these men had little or nothing to do, the Pier 92 officers supplied "working parties" every day for other regular navy establishments near Manhattan. There were a number of such establishments around, and Pier 92 assigned them priorities. Pier 45 had very low priority on this, and when the number of men available was low, Pier 45 didn't get any. As the business of equipping and readying LCTs to go overseas grew Pier 45 came to rely on these working parties more and more. By late February the Pier 92 population was so low that Pier 45 was not getting any working parties and was falling behind in its work of repairing and equipping LCTs, so the port director staff asked me if I could arrange for Pier 92 officers to send them a working party of twenty men every day. There were seventy-five amphibious force men living there, and the port director thought it was illogical for them not to be working on amphibious forces matters. I agreed, but I knew the pier organization was not fond of the amphibious forces because of their poor organization, and would not take kindly to changing their priorities, so I suggested that Commander Capehart write the Pier 92 C.O. and request that a list of twenty men be sent to Pier 45 each day for training. I agreed to supply the list of names. This worked very well and Pier 45 got its twenty-man working party every day until we left. I periodically changed the list, so that our men all got rotated into the work and didn't miss out on short leaves.

In early February the complications of working without a flotilla staff became so great that I finally pointed out to Commander Capehart's aide some of the negative effects this situation was having on both the Flotilla 9 men and officers but also on the port director's staff that I kept calling on for help.

He thought my points well taken, so took me to see Commander Capehart who, it turned out at first, didn't comprehend it all, and then later admitted that he had no idea that Flotilla 9 had been left without a staff and commanding officer. After thinking about the matter for a few minutes, he decided that it should be brought to the attention of a Captain Alexander in the vice chief of naval operations office in Washington, he being the person in charge of all LCT(5) matters. For a while he toyed with the idea of sending me to Washington to see Captain Alexander, but he was finally able to get through on the telephone to him. Captain Alexander also did not realize that Flotilla 9 had been left headless and said he would begin right away to assign a complete staff, and that movement for Flotilla 9 was planned in the near future.

Ensign Wayne Mackaman was one of the Flotilla 9 LCT officers at Long Beach. In 1988 I gave him a copy of my diary. A few weeks later I got a note from him in which he wrote, "I discover that I was an unknowing recipient of your efforts in New York. Living off base, I missed most of the confusion. The [LCT] 290 was stocked with everything we were supposed to have, crew got their foul weather gear, guns were mounted and operational, ammo for 30 caliber rifles, 45, line gun, 20 mm., and a Hill generator that never failed. ...Anyway, a belated 'thanks' for your effort in New York." Harry Souchon also thanked me sincerely and profusely in North Africa for a case of books that finally was delivered to his LCT.

At the end of the first week of March the port director began to get copies of orders sent to men and officers in Flotilla A, which was training in Florida to proceed to New York and join Flotilla 9. This included some staff people. One was a Lt. (jg) Melvin Olsen, who had been one of my roommates at Tower Hall. None of these arrived before we left on March 19. About the 14th of March a Lt. Zeigler, who had at one time been a Flotilla 9 group commander that was transferred to Flotilla 6, was transferred back to Flotilla 9 as a group commander. I had two or three sessions with him in the next few days turning over all the things I had pending of a flotilla or group nature. We had been notified on the 13th that five of our six crews at Pier 92 would be leaving on the 17th, as well as those in Long Beach. This later slipped a little to the 19th. I arranged for Cluster and his crew to be the ones to stay behind because Cluster had just been hospitalized with a light case of pneumonia.

Our sudden departure came as a surprise because we had been told earlier that we would not move until April 1 or later. The port director's staff people told me that the Casablanca meeting of Churchill with Roosevelt was partially responsible for the speed up.

The five of us at Pier 92 were assigned to travel on British LSTs. I told the officers this, but cautioned them not to tell the men that for I was afraid this would induce an unusual number to go AWOL before we left. Four of our five LCTs were to be of the Camden type. (LCT(5)s number 1 through 400 were of the Manitowoc design and Nos. 401-500 were of the Camden design--which was poorer in several respects than the Manitowoc design.) These four LCTs had been used extensively at Camp Edwards for several months and were in poor shape and lacked lots of spare parts. The major differences between the Manitowoc and Camden designs were: 1) the Camden LCTs were equipped with a different make of diesel-electric generator (made by Buda instead of Hill); 2) the main drive shafts from the main engines to the propellers were shorter on the Camden design LCTs, so were not interchangeable; and 3) the anchor winch arrangement on the poop deck is more awkward. On the Manitowoc LCTs the anchor winch was located so that it pulled the anchor cable in directly. On the Camden LCTs the anchor winch was on the one quarter and the cable led around eight or ten inches above and across the poop deck by means of pulleys to pull the anchor in on the other side. This caused an unending stumbling hazard as when getting around on the poop deck one had to step over the cable or get a painful bump on the shins. The Buda diesels were much less reliable than the Hills, breaking down frequently. When the diesel generator was down on an LCT, life virtually ceased. The anchor winch was electric, and couldn't be used, there were no lights in the quarters or the engine room, the galley range wouldn't work, for although it was diesel oil fired, it depended on an electric blower, and the electric ventilator for the quarters wouldn't work.

Forty-eight hours before we were to sail we were assigned our individual LSTs and LCTs. I drew the 434, Woodard the 431, and Souchon the 459. I don't know who got the fourth Camden one. Later that day at Pier 45 I found that the 434 was only 63 percent complete in spare parts, and had no spare parts at all for the Buda engine! The port director's staff people were quite apologetic about this, promising to send the missing material on the next convoy, and explaining that these LCTs had not been intended for overseas use, hence priority had gone to equipping those that were so scheduled. At the last minute they were ordered overseas and there wasn't enough time to fully equip them.

On March 18 we loaded all the men and their gear onto two trucks. As we drove off the pier the bosun first class who had been mustering them for several months showed up to wave goodbye. At first the men had hated him because of his strictness, but by now they had come to like him and they gave him a tremendous cheer. Many of the men were still drunk from their last night ashore, one was late, but only one was missing, so we replaced him before leaving. Our LSTs were moored in Todds Shipbuilding Yard in Hoboken, N.J. I

rode one of the trucks, and the other officers went over in a station wagon. I didn't let anyone get off the trucks, even while we were on the 23rd St. ferry to Hoboken. The men were quite surprised and shocked that they were going on British LSTs, and some remarked that if they had known this they would have gone AWOL. Port director's office had not informed the British LSTs of when we would arrive, so they did not have lunch for anyone, but did turn to and prepared lunch for all of us. First thing we found was that the last crew to operate the LCT-434 had not reeled in the anchor cable all the way in, and the anchor was dangling loose from the stern and swaying over the main deck of the LST. Since we had no power on the LCT, we had to haul the anchor in by manpower, then secure it so that it was no longer a hazard.

While we were taking in the loose anchor, the LST sailed, helped by tugs all the way, over to Brooklyn Navy Yard annex. Woodard's and Souchon's LSTs did the same. Two of Woodard's men went "over the hill" after being loaded on the LST, and I had to help him get two men out of Cluster's crew that evening.

The LCT-434 itself was in poor shape. It needed painting both inside and out. It had been banged around a lot, especially the stern, and there were all sorts of bulges into the quarters. At one place a hole had been poked through into the quarters, then welded closed, leaving a huge rusty scar that had never been painted. Boxes and loose equipment had been thrown into the quarters haphazardly. The 20 mm. guns were still in their cases, unmounted. There was no ammunition for them on board, but the LST said they would lend us some of theirs for the trip. The cooking and eating equipment was filthy, not having been washed after the last meal!][1]

Lt. Commander Page of the British Royal Naval Reserve was in command of the LST-367, and his executive officer was Lt. Charles Tyler, also a reservist.

At any rate, we started out the morning of March 19, out of New York harbor. It was a very large convoy, some eighty ships in it. We had some naval vessels escorting us and circling around us. One of the convoy ships was the LST 389, which is an American LST. One of the officers on board that was named Teller Weinman, who was from Piedmont. His father was a very influential judge in the Bay Area, Judge Dewey Weinman, a very good friend of my father's. And he had come out to New York for a farewell dinner with Teller, and I was invited to it, a few days before we sailed.

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[1]End of added paragraphs.

At any rate, the night of our sailing, after we got out of the New York harbor, we ran into serious fog. The British executive officer Tyler asked me if I would stand watch with their officers and help them in the foggy weather. So I agreed to do that and went up on the bridge and stood a watch, which was uneventful but it was my first experience standing watch on a large ship. The British LSTs, incidentally, were the same as ours. They were built in the U.S. and just assigned to them.

Chall: Did you go out with the British because we didn't have enough, or because the British were responsible for the activity in the African-Italian area?

Swent: No, the reason probably was just the luck of the draw. There were lots of American LSTs in the convoy, and it was an American convoy, American warships guarding it. Although there were a few British ships involved also.

At any rate, when the fog cleared the next day the convoy was just scattered all over. There were just very few of us together. One of them--I guess the lead ship was a British one, and he signaled back to the few of us that were there a quotation from Henry V: "O, we few, we lucky few."

We went on, and little by little the convoy gathered together again. We proceeded to Bermuda where we arrived after a couple of nights. And along the way our radio officer told me that they had received news that probably the LST 389 had been torpedoed. That's the one that Teller Weinman was on--because they broke radio silence and gave an S-S-S-S-S-S signal, which means a submarine attack. The convoy consisted of liberty ships, LSTs, LCIs, and a few transports, but not many, because they were too fast. The convoy proceeded at six knots, which is very slow for a bunch of naval vessels. But the LSTs and liberty ships had to have that slow speed.

When we got to Bermuda I wondered about how to write a letter. We were under censorship and supposed to not reveal military secrets and this sort of thing. And I was trying to figure out how to write a letter to my folks to tell Judge Weinman that his son's LST had been torpedoed. We finally got into the harbor. It took a long time to file in; we had to go in single file, and for all these ships to go in took a long, long time. We got anchored and we couldn't dock, so I was trying to figure out how to get ashore. We were promised a liberty boat would come by, but it didn't come by the first day. Then finally the second day one came by. Just as it was coming by, I noticed the LST-389 sailing into the harbor.

Chall: Oh, how great.

Swent: It was a relief. So I went over to it when I got the boat and looked up Teller, trying to find out what happened. He said, well, they had gotten separated from the convoy during the fog. Then apparently they came up to an LCI, and the LCI profile is very similar to a submarine profile; there's no question about that. And this LCI was also separated from the convoy. So they saw this in the dark and thought it was a submarine. So they broke their radio silence, just giving out this submarine warning. Then about half-way through their message they realized it was an LCI, so they just went off the air. And of course it was this going off the air that made everybody think that something had happened to them. Anyway, it was all right. They went on across the Atlantic.

After a day or so in Bermuda, we went on and went southwest a ways. We came across the Atlantic fairly well south of the Canary Islands, our southernmost latitude being about 26 or 27 degrees north. But it was an uneventful crossing. I practiced my navigation and I stood watches and we tried to get the LCT cleaned up, painted and everything. I had my ten men on board.

Chall: That was a ten-man crew?

Swent: It was a ten-man crew, and they cleaned it up. Had one troublesome character in the crew, and he was to be trouble all the way through. He was a young boy, about nineteen, and his older brother was in the navy. When we came back from liberty, in Bermuda, he was wearing a uniform with a service stripe and several decorations on it, which he wasn't entitled to. He was brand new in the navy himself, but apparently these were things he'd gotten from his brother. So I dressed him down about that. But this was sort of the beginning of lots of troubles.

The trip across the Atlantic was uneventful. It was interesting technically; I got to practice a little celestial navigation and use the sextants and that sort of thing. We made the Straits of Gibraltar April 11 and went through the Straits very late at night, about 11:30. It was very stormy and dark, and you could hardly see the Rock. I was on deck helping with the navigation and taking some fixes, because the channel is narrow and we had to be in a precise channel to follow on into Oran. We arrived in Oran on the 13th of April and found out that instead of having to launch the LCT, that it would be lifted off by a big crane which happened to be available in Oran. Most ports, a lot of the smaller ports, don't have those. So on the 15th late in the evening, about 10:00 at night, we were hoisted off. I stuck around there about two weeks, getting equipment and repairs and various sorts of things. At Mers El Kabir (an old French naval repair yard) about two or three miles west of Oran we saw the bow section of LCT-21 sitting up on an old wooden barge--very battered, but

recognizable. This was all that was left of the 21 after Peters, Maury, Parrish and I ran it through the fog on the canal and I dived overboard to get a log out of the propeller.

The 434, 435 and 431 were declared "unfit for action" until repaired and better equipped.

Experiences in and Around Oran, Arzew and Bizerte

Swent: Then on the 29th of April I was sent up the coast to Arzew, which is just a few miles away, not very far from Oran, with a load of thirty depth charges. They really didn't take much of our capacity. We could have taken about two hundred of them. Then when we got to Arzew I tried to find out where to unload these, and found out that the person that I had to deal with was my old friend Lieutenant Ryberg from the Manitowoc days. So we were long-lost friends. We unloaded the depth charges.

Then a few days later, on May 1, I was sent out on a trip to a town called Tenes, and then on to another named Cherchell, which was further along the coast towards Algiers. I had a load of buoys and some six-thousand-pound anchors, and I delivered those. It took about a day and a half to get up to Tenes, and another day to go to Cherchell, and then we came back to Tenes, leaving the next day for Arzew. We couldn't make it all the way back to Arzew in daylight, so I stopped at a town called Mostaganem, where we had a little base, about twenty miles east of Arzew, and went in there for the night.

Chall: You were delivering for other military areas then, for their use in the coming campaign?

Swent: Yes, but we had no cargo for Mostaganem. Then returned to Arzew the next day. We fiddled around with various things, and finally I got my first beaching on May 8, which was about a year after I'd first gone into the school in Chicago. We stayed and did lots of practicing beaching, sometimes at night, sometimes in the daytime, working a little bit with the army, loading and unloading.

Then on June 8 we sailed in a big convoy of LCTs for Bizerte. We went past Algiers. By then the front had moved all the way to beyond Tunis. So we left on the 8th and arrived at Bizerte on the 11th of June. Of course, Bizerte has its own big lake. There's a very narrow entrance right at Bizerte, then you go inside and there's a big lake called Lake Bizerte that's almost circular, about ten to twelve miles in diameter. It's saltwater and is

shallow but navigable. At the west side of the entrance there's a place called Karouba where the old airport had been. It was pretty well demolished, but our people had gotten it back into service. We were based down at the southern end at a town called Ferryville, and there was a little harbor there which was part of an old French naval base. Almost everything around had been badly destroyed by the Germans as they retreated, if not by our own bombing. But the French naval base really hadn't been damaged very much. We went in and out to town through there. When we went ashore we had to walk through it.

Late in May, Cluster arrived in Arzew with a new crew, on the LCT 373, and had a box of equipment on board for me that the Pier 45 port director's staff had sent. He had come over on LST 158 and told me Dale Morgan was the executive officer on it! I looked him up and we had a good reunion. Knox was on LST 61 and was in the same convoy. Nevius was on an LST, but didn't sail since the captain turned out to be a drunk and incapable.

I had the darnedest time with my crew. One of my problems with the crew--and I don't think this was peculiar to me; I think probably everybody had the same problem--was the question of stealing. They would steal anything that wasn't nailed down if you weren't careful with them. One of the reasons being we were undersupplied; we were always scrounging for supplies, for this and that and the other thing, spare parts, food, amenities of all sorts. So my policy was that I wouldn't condone the stealing unless it was something that we vitally needed.

Chall: What were they stealing, from other--?

Swent: Well, the problem was walking through this French naval base that hadn't really been damaged, and they had all kinds of supplies there. They would try to steal anything; stuff that we didn't even need at all, just because it was available to steal. I just laid down the law on this and said, no, we can't do this. And Kiger, this fellow that I had trouble with, was the best. When I wanted something, I'd take him with me.

Chall: I see. [chuckles]

Swent: But otherwise I wouldn't. But he was very, very lighthanded.

Chall: Just on that note, you were not very much older than your crew members, and maybe some of them were older than you.

Swent: Oh, I don't think so. I was twenty-six by then, and some of these fellows were under twenty. I don't really know the age of all of

them. There might have been one or two that were up to my age, but I don't think there were any that were older.

Chall: Were they all fairly new recruits to the navy, too?

Swent: Oh, the whole ten of them were new. Now in the ferry business, when I was ferrying the LCTs, no, I had gotten some older people then.

Chall: But these were new. And did you generally get their respect?

Swent: Yes, I had good crew loyalty. I didn't have any problems except with this one boy. No, it was really a very loyal crew. They would do all sorts of things for me. They would steal things for me. Once in Oran, when I had this portable typewriter and we were nearby where they were unloading a bunch of army goods, they stole a case of typewriter oil for me. [laughter] And I didn't need it, but the skipper has a typewriter, and here's typewriter oil. So they stole a whole case of it. If I had kept it all my life, I still wouldn't have used it up.

At any rate, in Bizerte we would go ashore through this French naval base. It was sort of a repair base. It wasn't big; it didn't have big drydock facilities or anything like that. It was more of an arsenal, I guess. At any rate, that was about the only facility. The little town of Ferryville wasn't too badly damaged. But up around Karouba and Bizerte everything had been leveled. On occasion I got to drive over to Tunis, which was only a few miles away. The city itself hadn't been seriously damaged, but the waterfront was absolutely a complete shambles. There wasn't anything standing higher than a foot and a half from the ground. I had never seen such devastation. This was apparently not our bombing, although one of the rides that I got over there was with a couple of bombardiers who wanted to see what the effect was. But a lot of it was obviously demolition work that was done by the Germans before they pulled out. They left nothing useful in Tunis. They did a thorough, thorough job.

We practiced there in Bizerte; had two or three practice runs with army and some just on our own, beaching and learning beach designations and the signs that would be put up on the beaches to identify them and that sort of thing. The system was to call them by colors. You would be assigned to land at Red Beach or at Blue Beach or at Green Beach. They usually would put up some banners or something with those colors. The beaches as planned would be just a given length. And you had to land within those limits; those limits would be fairly well explored for obstacles and mines. If you got outside of those, at least in a real landing, you might be in trouble.

Invasion of Sicily

Swent: We received our orders for the invasion of Sicily on June 27th. And this was a very massive document. I was well impressed with all the work that had gone into it, and the detail into which it went. D-Day, of course, and H-Hour, were not named. They were to be supplied later. Actually we never did get a very firm designation of what D-Day was. We sort of had to get it by inference.

Chall: They did call it D-Day then?

Swent: Oh yes. H-Hour and D-Day were the standard terms. H-Hour was the time of the first landing, whatever wave of craft landed first would be H-Hour. And then the timing of events would be H minus this, or H plus half an hour, or H plus two hours, H minus eighteen hours, that sort of thing. And the days were the same way. D-Day was the day of the landing, and D minus one was the day before, D minus two was two days before.

Chall: It was all plotted out.

Swent: And the whole operation order was done with these terms. Nowhere were H-Hour and D-Day set. And I expected that we'd get some sort of formal notice, but we never did, as to when H-Hour was or what D-Day was.

Chall: But some lead would know, and then you would all just follow in order after that? Is that the way--?

Swent: Well, I'm not sure how we were supposed to know. I found out that D-Day was the 10th of July, and that the H-Hour, at least the hour I was supposed to beach at, was at 4:25 in the morning. We were supposed to go to Blue Beach in the town of Licata on the southern shore of Sicily. There were three beach groups set up in the American sector there. The American sector was to attack the south part of Sicily, south coast, and the British were to attack on the east coast, although there were mixed forces in both groups. But the British had charge of the landings on the east side and the Americans had charge of the landings on the south coast.

While we were in Bizerte, after we got the operation order particularly, we were subjected to lots of air raids. The pace of all activity just picked up tremendously. More and more craft came in and the lake just got absolutely jammed with craft and ships. It was a big lake, ten to twelve miles in diameter, but nevertheless it got filled up, because they were all anchored. And every ship that anchors has to have some room to swing around in,

so pretty soon the lake was about as filled as it could get with anchored ships and craft.

On about July 2 I got what was called a relief crew, which was five extra men and one officer. The officer was Frank Grace. He had had a couple of months in LCTs back in Chesapeake Bay and knew them fairly well. I was quite lucky in that some of these relief officers that came over had virtually no preparation. In fact, he had been told that he would have his own LCT, and it was sort of a disappointment that he had to come on as a relief and be under me. But he was very good; I liked him. He was a fellow from Tennessee and we became lifelong friends. He just died about a year and a half ago from prostate cancer. We were in touch right up until when he died.

We got five enlisted men and then a day later I got another one. So we had a total of eighteen people, whereas the quarters were made for eleven. So we had to use a "hot bunk" system, people taking turns in the bunks and that sort of thing. We did get a few extra bunks put in when we had time. But I don't remember whether we had them all put in by the time we left for Sicily or not; I doubt it. I think that was something that came later.

We had two big practice landings on June 24th and 25th, called "Copybook". I didn't think things went very well.

Oh, when we got these extra men--this is interesting--I was out doing some work with my compass, trying to check my compass out. And I got a signal. All the signals that we got were either by a blinker lamp or by signaling with flags. And our signal men were all fairly untrained. They used to get these messages all mixed up and words changed and everything. Anyway, I got a word to come in and come alongside the LCT 140 and pick up some extra screws. Well, when I got there it turned out to be an extra crew.

Chall: That was quite a surprise! [laughter]

Swent: It was quite different than picking up a few screws!

As the word began to sift down--I didn't tell my men that I had received this operation order, although they could obviously see it, it was so big. I was really worried about security, because the LCTs had no place to put anything. These things were top secret. Well, it wasn't top secret then, it was secret. The top secret term hadn't been developed. Anyway, it was the top classification of secrecy, and you were supposed to keep the papers in a locked vault and all that sort of thing when you weren't using them. And we didn't have any locked vault or anything like that on an LCT. So they knew I had it, although I don't think they read

it. They wouldn't have understood it if they had read it. They knew something was doing, but they didn't know what. But the whole tempo was obviously picking up.

So I had one problem with this boy that I had had problems with before. He seemed to have decided that he wanted to get off of the LCTs, and he was trying to just break discipline rules and that sort of thing in order to see if I would get rid of him. So I told him a story which was partially true and partially untrue about a fellow who had been on an LCT who had been courtmartialed for disciplinary problems, and they had found him guilty of mutiny in wartime and sentenced him to ten years in Portsmouth Prison. Well, this wasn't really quite true. It was based on the fact that one of the LCT officers had decided to discipline a boy, and he had a courtmartial order for him, and they were going to try to send him to Portsmouth and the charge was going to be mutiny in wartime, but it hadn't actually happened yet. But I put it in the past, and this quite impressed the crew, and it straightened all the problems out.

Chall: Even with him?

Swent: Yes, as far as trying to get off the boat was concerned.

At about 4:00 a.m. on July 6, the day before we sailed, we had a tremendous air raid. And of course, the lake was just jammed. There were about 250 ships in the lake, and it was a good target. We had lots of anti-aircraft defenses around the lake, and great big searchlights. Finally the searchlights did pick up one plane, and it got shot down. The minute it got shot down and started falling, just a tremendous cheer went up. It was loud enough that you could hear it over the firing from the lake. That was the first plane I'd seen shot down, and probably the first one that hundreds of others had seen shot down.

That day turned out to be a scorcher. There was a rare wind blowing, called the "Sirocco"--an offshore wind bringing furnace-like blasts of hot air from the desert. That evening the wind resurged and blew hard so I expected a storm. It didn't come but the high wind apparently protected us from having an air raid that night.

We were loaded with vehicles on July 4, and with twenty-seven soldiers, mostly crews for the vehicles.

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We had a D-7 tractor in the bow, followed by two big beach sleds which were loaded with gear, including wire netting to lay

down on the beach and to give vehicles traction in the sand. Then there were two army half-track vehicles with one-ton trailers, two army vehicles called DUKWS. These were a truck which had an amphibious, watertight body, with the wheels projecting through, and a propeller. So it was amphibious; it could run along in the water. It had very little freeboard. When it came to the beach they would put it into gear and the wheels would engage and it would come out of the water and drive on land. They were very useful vehicles.

We also had one amphibious jeep. That meant that it was an ordinary jeep that had been waterproofed so that it could go through a certain depth of water. And its exhaust was piped up to a point above the windshield, and everything below that that was sensitive to water was greased so that the engine would operate underwater. Sometimes in these landings you would hit a sandbar offshore and the landing craft couldn't get any closer. And if the vehicles discharged they would run into maybe twenty or thirty feet of deeper water between the sandbar and the main beach. So the jeep was prepared for that.

Then we had a two-and-a-half ton truck, a three-quarter ton truck, and twenty-seven soldiers who were manning these different things. We were loaded with thirty-eight more soldiers the afternoon of the 7th. We beached in Karouba where loading "hards" had been prepared for LSTs and LCTs to beach and load over their ramps. I described this scene in my diary as follows:

"The sight here was one not to be forgotten. Hundreds of army men were milling around. Sergeants were calling roll all over the place, issuing blankets and life belts, battle dressings and sulfadiazine, and shoving men on board these overcrowded vessels. The place was dusty and hot, everybody in a sweat. All one could see on either side of us was a sea of soldiers sitting on top of the assorted vehicles that we are carrying. There were 44 LCTs loading personnel at one time--which is quite a sight, after the measly four we used to load in Arzew. The scene had more quality to it and will stick with me longer than did the same scene on Copybook because of the knowledge that this was the final step before the invasion. At Copybook certain LCTs weren't present, but somehow everyone managed to get in on the real thing.

"The shore establishment is bare now. Every soldier that was around the last two weeks has been loaded on a vessel of some sort. So has almost every available vehicle. Most of the naval personnel are on boats or ships of some sort, and all that is left of the area that was teeming with men and activity a few days ago is a shell. When I got back to the loading hard [from a walk to the

base headquarters] nearly all the soldiers were loaded, so that the contrast of the lonely shore to the crowded boats was very vivid."

We were to be in the first LCT wave on the Blue Beach at Licata. I don't remember when H-Hour was, but it was probably something on the order of 3:00 or 4:00 in the morning. We were due at 4:25, but we were not to be the first ones there. The first ones to be there were the little small boats, the LCVPs, mostly with soldiers. The LCTs were next, some with tanks, and others, like us, with vehicles.

[insert from diary] "In less than an hour our guide ship, the SC 696, came along to take us out. Yellow, green, and red LCTs were already gone. LCIs and LSTs were gone by now, so that the lake assumed a sudden emptiness with only 19 LCTs in it when 24 hours before there had been some 250 ships and craft."

As we were pulling out of the lake, LCT 364, Roger Williams, came alongside and wanted to know what to do next. [Chuckles] He hadn't figured out yet that this was D-3, and he didn't know what he was supposed to do. So I enlightened him as well as I knew, that this was D minus three, and when our beaching times were and all this sort of thing.

Chall: I wonder how they anticipated your all getting that message?

Swent: I don't know. You wonder how we won the war sometimes. Most of us figured it out from the loading orders we got and then looking up the day for loading in the operation order.

We sailed from Lake Bizerte on the 7th in the afternoon. We collected outside the harbor. It took quite a while to file out. They all had to file out through that narrow entry which had been blocked with sunken ships also, so it was a tricky navigation. And we then anchored outside the harbor for the night.

Chall: With a big convoy like that moving out so slowly through the neck, were you strafed a lot?

Swent: No, during the daytime we had no air problems. All the air raids that we had were at night. The Germans by then were having to conserve their air force. We had the air domination, which was marvelous. As we got closer that was no longer true, but down in Africa all we got was nighttime raids.

After we anchored I started to have a mass meeting of the 65 army passengers and my seventeen-man crew to explain rules of conduct while in convoy, eating and sleeping arrangement, disembarkation procedures, and where we were going. The army

people had been shown a model of the beach, but not told its location. I had just started this talk when Grace told me that Henry Souchon, LCT-435, had anchored too close to us in this deep water and his anchor had gotten fouled on our anchor cable. When we raised both anchors they were interlocked! We tied a chain and a hawser to them with a grappling hook and tried to pull them apart. The anchors finally separated and caused the hawser to whip, almost knocking an army officer overboard!

And then we all set off early the next morning. We went fairly well east, paralleling the North African coast. What we were to do is go east until we came to a point south of Malta, and at the western end of Malta, and then turn north and go straight to Sicily.

On the way we spent two days cruising, and of course we got into a terrible storm the second day. This is well known in history. It was very questionable whether we'd be able to make the landings or not. We had to observe radio silence. LCTs didn't have radios, but for the invasion one in ten had had a radio put on board and a radio man. But I didn't have one.

I had had lots of troubles with signals like "Come alongside to pick up extra screws." I had had lots of troubles with signals like that that had the words changed or even words omitted. And we were in long lines in these convoys, and messages were passed down, either by blinker or by signal from one LCT to the other down the line. I had my signal man, Herman Brown, who was very good--I never had any problems with him--I had him read the messages as far away as he could get them, even if they were two or three LCTs ahead, to be sure he got the right sense by the time the message got to us. Because each time it went through an LCT it was just like people--things would get changed a little bit.

For the first day and a half the LCTs sailed in a convoy of their own, with our own escorts. The convoy plan was obviously made out by persons acquainted with LCT flotilla organization. The LCTs were arranged in each column by increasing numbers--our column included LCTs 15, 155, 196, 197, 220, 244, 294, 431, 434, 435. As much as possible the landing waves paid some attention to divisions and groups, but no attention had been given as to which LCTs had division or group commanders on them. The group commanders were forced, before we sailed, to change over to different LCTs than they usually had quartered on. I felt this was poor planning as inexperienced people were to lead experienced ones. I was assigned to follow Woodard (431) who had far less experience than I. The convoy was organized by landing beach colors--red, yellow, green, and blue--there being a column of LCTs for each beach--four columns of eleven each---virtually all of LCT flotillas 9 and 10.

At any rate, on the 8th we turned north towards Malta. Then that night, the night of the 8th and 9th, the storm came up. By morning we had terribly high seas and waves. The LCTs were rolling something terribly. We had lots of seasick people on board.

Chall: I bet. How about you?

Swent: I wasn't sick because I just didn't have time to be sick. I was just too busy; there were too many little things going on. We joined up with the LST convoy that we were supposed to meet east of Malta. Now the storm was thick enough that we couldn't see Malta, but we knew where we were. Then we proceeded on north towards Sicily. And we were still a long ways away.

The storm started to die down around midnight, between the 9th and 10th. We were due at a beach at 4:25 in the morning on the 10th, but we were way behind schedule. We were supposed to follow LCT 431, Don Woodard, and in the dark it was about all you could do to see that one LCT, let alone anyone in front of him. You couldn't tell whether he was following anybody or not. And at times it turned out that he wasn't; he was lost. At one time I quit following him and went ahead on my own, but later we all got regrouped.

The beaches were supposed to be identified by having a reference vessel stationed five miles, ten miles, and fifteen miles out from shore in a straight line. And they had certain light signals that they blinked to seaward to identify themselves as the reference vessels, as to which reference vessel it was, because they had these for each of the beach groups. We finally spotted our fifteen-mile reference vessel.

Right then I knew we were going to be late. Because there had been a lot of milling around, a lot of stopping and uncertainty. Nobody knew anything; I kept trying to find out what was going on. I would go up and ask the other LCTs what was going on, and they wouldn't know. We were supposed to have a submarine chaser, the 696, that was to lead us. And we couldn't find him at times.

At any rate, once we got inside the fifteen-mile vessel, we finally came to the ten-mile vessel. And we were about there when H-Hour came, and at our speed, it was six knots, it was going to take us two hours more to get in. Although we could go a little faster than that; it was an hour-and-a-half anyway before we could get in from the ten-mile vessel.

So H-Hour went by while we were just about at the ten-mile vessel. It wasn't very spectacular. We saw some rockets and some tracers. We could see where the shore was. It was beginning to

get light and you could see the outline of the shore. As we went on in, there were two large explosions. One first, and then a few minutes later another one, right near us, but we didn't know what they were. One of the army officers on board said on the first one, in the light from the explosion, that he had seen a ship breaking in two and sinking. But I didn't see it. Then we had another one that was just as big and somebody said that was an LCT that had blown up. But again, I didn't see it.

Finally we got by the five-mile vessel and I spotted Blue Beach, where we were supposed to land. There was a curtain of splashes ahead of us. Apparently there was a battery of mortars on land. One of the army officers thought he could see that they were behind some hills and were firing mortar shells at will. They weren't targeting anything, because they probably couldn't see them and they didn't have any spotters. So they were just shooting into the water on general principles.

Chall: But you were all coming in.

Swent: Yes, but we had the Blue Beach in sight now, and we knew where we had to go there, to the left flank (which our operation order showed to be the site of some machine gun nests) and we set course for it. It was right towards where these splashes were. Our helmsman, Peter Buffa, kept trying to go around them, and I had to keep bringing him back onto the course. He finally realized I meant to stay on it. We still had a lot of raingear on from the storm. I hadn't had a chance to take my raingear off, so I was fine.

As we got close to this mortar range, we had three close calls. One shell landed to our starboard maybe fifty feet and drenched us pretty well. And then another one landed about twenty feet on the port side, and then a third one, when we got right at the line where they were landing, why, one landed very close, about twenty-five feet on the port side. So it was good I had the raingear on. Everybody was diving for cover when each one of these went off.

Finally we got inside the range, and then all was quiet. We finally beached at 7:40 on Blue Beach. We were three hours and fifteen minutes late. It was obvious on the beach that there hadn't been much resistance to the landing there. People who were already there were loafing around; nobody seemed very excited. They had taken some prisoners; we saw them there. But I didn't have time to look and see whether they were German or Italian. Apparently by then the mortars had been put out of action, I guess, by our naval fire. We had naval destroyers and cruisers firing

from way outside the beach area, and I think they eventually took them out.

At any rate, Frank Grace and I ran onto the beach for a few seconds just to say we'd been in Sicily and touched ground. The beach battalion asked us to take off a bunch of life preservers and lifebelts that they no longer needed there, and threw them on our deck. We withdrew and went up to Red Beach, to a place where we were supposed to rendezvous after the landing. Then our sub chaser led us up to the next town, which was called Gela. We were supposed to start unloading ships there and take their cargoes in, but nothing happened all day long.

We were finally assigned to an LST to unload it. It was anchored but before we could start to unload it, it pulled up anchor and started cruising. It cruised up and down from Gela to another town called Scoglitti, which was the area of the third landing. (The Americans had three beaches, one at Licata, one at Gela, and one at Scoglitti.) Anyway, this LST cruised up and down. We followed it for several hours. Then finally it released us.

It was just a whole chain of uncertainties. We got assigned to different ships and finally wound up with a firm assignment to unload a transport called the Harry Lee, which we did that night. It was terrible. The seas were still running somewhat, and we got banged around pretty badly by being tied up alongside. And we had to be under their curved bow in the front. We were unloading the front hatches and we got a lot of damage, rising and falling under this curve. Because we would go up and our railings would get bent, and we banged against it and all the stuff in our port lockers up in the front, in the bow--that stuff all just got spilled. We had paint stored in there and it got thrown out and cans sprung open; a real mess, lots of damage.

Chall: I'm a little uncertain, because I don't know military history that well--you had all of these vehicles aboard. Were you supposed to empty your craft of all those vehicles when you landed on the first beach?

Swent: Yes.

Chall: And then you were to follow and help others unload?

Swent: Yes.

Chall: You were empty by this time?

Swent: We emptied on the beach, and then we rendezvoused. As generally occurred in other landings, we had an officer on a small vessel who

was in charge of directing the LCTs. He was in touch with the flagship of the whole operation. They would ask him to send an LCT here and send an LCT there, and he would assign them to the different ships that needed unloading. There was one of these vessels, sometimes a subchaser and sometimes an LCI, at each beach area--Licata, Gela, and Scoglitti.

Chall: I see. So you were really then almost like longshoremen.

Swent: Yes, we were in essence longshoremen, bringing in follow-up material. The personnel mostly went in in the small boats, the LCVPs. We took vehicles and cargo, but sometimes the vehicles, of course, had crews, and that was why I had sixty-five soldiers on this particular first landing. The cargo from the Harry Lee was vehicles (with crews) and ammunition.

Chall: Were you assigned more cargoes from time to time from another--?

Swent: Oh yes, we were in great demand. Actually, I think the delays at Gela were because our forces were being repulsed there, and it was a very close call on land. I think they weren't going to push stuff ashore there until the beachhead was a little better controlled, and they wanted to keep the LCTs empty in case we had to suddenly do an evacuation of the beaches. I don't know; I'm supposing now with the hindsight of what I've read about the situation there. But Gela was where German tanks broke through and got down to within a half mile of the beach and this sort of thing. The tanks were put out of action by cruiser fire, which was very accurate. But it was a very close call.

Chall: Yes. You set out in July. And as I understand it, you didn't capture Sicily until August 17.

Swent: Well, it was in August when they captured--

Chall: So it took about a month.

Swent: Yes. Anyway, we stayed around the Scoglitti area unloading transports and LSTs. Some LSTs, if they couldn't beach, we were supposed to unload. There were two methods of unloading. For unloading LSTs we did what was called "marrying" the LST. The LCTs had had their tank deck bulwarks (solid railings filled in with sheet metal) cut with acetylene torches so that a section amidships and on each side of an LCT was removable. We would remove these, then pull up in front of the LST, at right angles to her, then the LST crew would lower that ramp slowly onto the LCT deck through the space in the bulwarks. Once the ramp was down, we would put out bow and stern lines to the LST to hold us together. Then other LCTs would tie up alongside the first LCT and take their bulwarks

down also. When six or eight LCTs were tied up, the vehicles on the LST would start driving across the nest of LCTs to the last one until it was filled, then onto the next one, etc., until the LST was empty. The first LCT stayed tied up until the LST was empty.

You unloaded a transport by coming up alongside of it, tying up alongside. They had their own hoisting gear and winches, and they would hoist these vehicles up in the air and then swing them out and lower them down onto the landing craft deck. Or if it was cargo, they'd do the same thing. They just did it the way a longshoreman does, in these great big nets, and dump it on your deck. When you were to unload that kind of cargo at the beach, you were on the beach for hours, because it had to be unloaded by hand.

Chall: And officers did that, too? The officer was doing the same work as the men?

Swent: No, we generally took charge of keeping control of the craft. When you got to the beach the army provided the labor for unloading. If it was a cargo that needed hand labor and that sort of thing, they provided the people for it. None of the navy crew mixed in with that. We generally were tending the lines and tending to the anchor and trying to keep from getting what we called broached on the beach.

These landing craft were long and narrow, and if you weren't careful you could get swung around by the currents or the waves and go against the beach lengthwise or sideways. And if you did that you were sunk; you could never get out of that by yourself. You had to be towed off if that happened to you. So when we beached we would drop an anchor while we were making our run for the beach. We dropped our anchor maybe several hundred feet off, and then tried to use tension on the anchor cable to keep our stern from drifting while we were being unloaded. There was not much tide, so the tide was a matter of a few inches. But if you went in on low tide and then the tide came in on you, you were liable to be moved around, unless you started the engines, pushed the LCT further onto the beach and paid out some anchor cable.

Chall: I see. My, there are so many things to take into account.

Swent: At any rate, we moved around through those three towns, those three beaches, unloading transports. We were in great demand. At Gela I finally was assigned to the transport Arcturus. They were very anxious to get unloaded. On these beachheads there was a designated priority of ship unloading. But every captain wanted to get his ship unloaded and get out of there. So they didn't pay any attention to the priorities, they just kept trying to commandeer

landing craft to come and unload them. So the landing craft were in great demand!

At any rate, Arcturus was very good to me. The commander of it offered me all kinds of stuff. He said, "Send the crew up for fresh water baths." And he gave us a lot of food that we didn't have, particularly fresh bread I remember. At any rate, we made quite a little haul. That's when I began to realize what power we had! [laughter] And he said, "Be sure to come back." You know, he didn't want us to go off to some other one. He wrote me a note which I still have, addressed to Captain Swent. I was only a lieutenant junior grade, but I was captain of my vessel. He was dealing as one captain to another.

[After the initial unloading of vehicles from transports, the work slowed down. Cargoes of ammunition, gasoline, rations were loaded onto us from the cargo ships fairly fast, using their winches, nests, booms and cargo nets. But unloading on the beaches had to be done by hand and was very slow. Consequently the beaches soon became clogged up with craft unloading or abandoned and we would have to wait for hours to find a place to beach.

One interesting experience was unloading our first liberty ship, the David Caldwell. It carried a civilian (merchant marine) crew of forty-two men and officers, and a naval "armed guard" crew of thirty-one men and two officers, and a naval communications officer. The armed guard crews on these ships manned the anti-aircraft guns. At one point I asked an armed guard crewman to give us some slack in the lines that were holding us against the ship--a job of a minute or two. He went in to do it, and one of the ships union merchant marine crew yelled at him, "Don't handle that line, son! Get a merchant marine man to handle it!" Later I found out that the naval people weren't allowed to do anything but man the guns because they would be keeping a merchant marine union man from getting overtime!

The LST-158 was hit by a bomb while beached unloading a cargo of ammunition. The ammunition caught fire and began exploding, killing most of the soldiers doing the unloading. The fire couldn't be fought and the crew abandoned ship over the stern, most of the men going down the anchor cable hand over hand because the ramp was burned by the fire and the water too shallow to jump. One navy man was killed, six injured. Dale Morgan was uninjured but lost all his personal effects.][1]

After several days, and I don't remember how many right now, the army took Palermo. We were sent back to North Africa first,

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[1]Paragraphs added by Mr. Swent.

sent back to Bizerte, on July 19, where we were dry-docked and repaired. On August 13 we went to Palermo.

[While we were in Lake Bizerte being overhauled, we saw the LST-367 come in from sea. As soon as we could we sailed down the lake to find her and had an impromptu reunion. My diary recounts it better than I can now: "We found her way down by Ferryville, about a mile from our anchorage. Went over near to her and sent a semaphore message, "Offspring requests permission to come alongside port side." The answer we got back in a few minutes was a "Yes" and then the signalman finished off by enthusiastically waving us in. The whole LST crew turned out to see us come alongside, officers and all. It was a great meeting--much like that of long lost brothers or something. As soon as we were tied up Grace and I went on board the LST, and Britishers began coming down onto the LCT and my men onto the LST and renewing old friendships. I was positively amazed at the welcome we got, for it was more than just cordial and hearty--it was very warm and animated--there being lots of broad grins, slapping of backs, and shaking of hands. Grace and I were practically instantly swept into the wardroom and a drink placed in our hands before I had even finished introducing him around. We were asked to stay for dinner, but had already eaten, so sipped our drinks while they ate--up on the navigation bridge, out of doors. The crew of the LST was intact--from Captain Page to Sub, and from chief bosun mate down to ordinary seaman.

"Since we left them, the 367 has done quite a bit of traveling in the Med--has been all the way to the Red Sea, in the Suez, in Alexandria (and of course side trips into Cairo), Tripoli, Sousse, Bougie, and numerous smaller places. They were in on the British landing at Avola on Sicily. At present they are here for a rest of unknown length.

"The evening was a boisterous one. After dinner we had several more rounds of drinks on the bridge, then adjourned to the wardroom where Pilot played his stock of songs on the piano and we sang and exchanged experiences in the invasion until it was after midnight.

"The joyous welcome that I and my crew got from the officers and crew of the 367 was not only enjoyable but was a great compliment to the boys that I have."][1]

We were in the Palermo harbor doing various duties there. One of them I had to do was to go out to the island of Ustica, which is about twenty miles north, outside of Palermo. We had taken that island, and they needed supplies. We had to take fresh water and supplies out there. It was a very interesting trip.

Then we got assigned to one of these, behind-the-lines.

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[1]Paragraphs added by Mr. Swent.

Patton was trying to push the Germans up along the north shore of Sicily, towards Messina and the Straits of Messina. And he organized three amphibious landings behind the lines. I was assigned to one of those, to land in the middle of the night at a place called San Stefano. By the time we got there the Germans had retired and had pulled out, because they were retreating fairly fast, so the operation was cancelled so that our cruisers wouldn't fire on our army. Anyway, we found no resistance there. We made our landing at another place, Barcellona, discharged our load, and then pulled out.

Adventures Moving up the Coast of Italy

Swent: Then a few days later the conquest of Sicily was completed. We got sent up to the port of Milazzo, which is just four or five miles from Messina. This was September 6th. This was a port that was commanded by the British. They had a British port commander and we were under British command there.

After a day or two my boy, Kiger, that had been troublemaker began to have some pains low in his back and I tried to get a little medical attention for him there, but the doctor couldn't find anything. This was a British doctor that looked at him, because there were no American forces there.

We got orders to load some RAF equipment and personnel, and then to sail north up the coast of Italy. Landings had been made by then across the Straits of Messina. The British had gone across the Straits of Messina, which are about four miles wide, and landed on the foot of Italy and were securely on the foot. We were sent up to Salerno with twelve British LCTs and an escort of two minelayers. The landing place was to be just south of the town of Salerno. But we had no operation order for this one; I had no idea what I was getting into, except I was to take this load to a certain place south of Salerno.

Well, it was obviously a landing. While in Palermo we had been given some messages from time to time about a plane with Italian markings that will be coming in; please don't shoot at it. Apparently they were arranging the surrender of the Italians at that time. We had no radio, had no news. So we started out one night cruising up the coast of Italy. In the morning we passed Stromboli, the volcanic island there and saw it fuming away. I would have liked to have stopped there, but we didn't get a chance.

Then in the early morning an Italian submarine surfaced at a distance from us. And oh boy, we were really traumatized by this because we didn't realize the Italians had surrendered. We manned

our little machine guns and expected to have some action or something, but the Italians surrendered to one of the minelayers. So we proceeded on up.

It took us about twenty hours to get up to Salerno. Got up there and it was obviously a major landing. You could see big convoys anchored out and landing craft running back and forth. We got up and I reported to the flagship there and got orders to go right into the beach. This was the northernmost beach, just south of the town of Salerno. It was just real action all over the place. There was a lot more action than there was at Sicily. Lots of anti-aircraft firing--this was late in the afternoon--they were laying smoke smudges. That was one of the things they had developed; they found that protection against these air raids was very good by putting out smoke. Except that you couldn't see where you were going.

Chall: Yes, it was hard on you all, too.

Swent: And of course there was a lot of smoke from burning things, and lots of explosions around. There was just real confusion. I later found out that this was D-day for the Salerno landing. Anyway, we managed to get in on the beach and then unloaded our RAF equipment --this was a British beach basically. Then we were assigned to go back down to the American beach which was a few miles to the south, off of a town called Paestum. We reported there and went into the routine of unloading ships and taking the materials to the beach.

This was where the Germans first sprang their radio-controlled bombs on us.

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These bombs were launched from bombers way away from the targets, so they could go out where there was no air cover and launch their bomb. It was in that sense a flying bomb that could be controlled by radio to its target. And this was a surprise, a new weapon. Several of our big ships got hit. The cruiser Savannah got hit and eventually had to be towed away. And we got lots more air raids there than we did down in Sicily. We were harassed during the daytime by raids. There was all sorts of junk floating around in the water.

One of the things that the navy beach battalions and the army used on the beaches, so the vehicles wouldn't get stuck in the sand was, in essence, wire fencing. It came in big rolls just like it does to set up a fence. And these rolls are about eight feet long, and about twelve to fifteen inches in diameter. They would just roll the material out on the beach and stick it into the sand.

Then the vehicles could use it as a mat. We would carry this as part of our cargo sometimes. It was on those beach sleds, for instance, that we took into Licata.

At any rate, sometimes these would get dropped into the water, and not get used. At some point I picked one of these up on one of the propellers of my LCT at Paestum. And this put me out of action. I found out that there was a naval diver on board a naval tug that was in the area. I asked for help and they sent the tug over and sent the diver there. He was under the craft, working on getting this off the propeller.

The British warship Warspite was in the area, and she got hit with a radio bomb at about that time, and she had to be towed away. So they called for this tug and for the diver and off they went. He hadn't finished the job yet, and there was no other person who could tackle it. I found out I was the only person in the crew out of eighteen people who could swim. So I dove under the boat to assess the situation, see what it was, and started just working on it, a little bit at a time, diving under and staying under maybe a few seconds at a time and working on it.

Chall: What did you work with? You needed tools.

Swent: Well, that's what I was trying to find out really, what was needed and what you could do by hand, what tools I might need. The problem with this fencing, was that it was made with quarter-inch rods put through it the length of the roll at about every five or six feet. The wire of the fencing itself was thin enough that I could work that by hand, but one of these quarter-inch rods had become caught up on the propeller and that I couldn't handle by hand in just a few seconds.

Finally I found out in one dive that where the propeller is turned, of course, under the LCT, the bottom of the craft makes a sort of an upward hemisphere, and then tapers off toward the stern and comes back down almost to the same elevation. We generally floated so high in the water that there was air in the top part of this space. If the water was calm I could stay there with my head up in this air bubble and I could work.

The first time I did this I was delighted and stayed there for several minutes. And I never thought about it, but when I came back out the crew wondered what in the world had happened to me. Of course, none of them could swim, so none of them wanted to dive over and see what had happened. But they thought I was lost.

Then I told them what I'd found, and I got some tools that I needed and went back down. It took a long time, but I finally got

this landing mat off. Then we went back to work. I didn't realize the risks I was taking at the time. I later found out that, of course, we were getting shelled and bombed almost all the time. Water is not like air. Air is compressible, and if you get a hit, say, fifty feet away, if you don't get hit by the shrapnel the concussion may knock you down or something, but it isn't really physically damaging. But in water, it is. The water is incompressible and you get a terrible shock wave. You're really not supposed to be underwater when you're being bombed. And I didn't realize that at the time.

So we went on unloading for quite a few days. Then at one point I got sent north on a special trip to a town called Maori, which is north of the town of Salerno. It's right where the Sorrento peninsula comes into the mainland of Italy, and there's a road--really, it's a trail--that goes up the mountainside, zigzags up to a pass that dominates the inland road that goes behind Salerno and over some lower land on the interior and then on up to Naples. And this pass up there dominates that. We had landed some commandos who had gone up and taken this, and we had to take a supply of ammunition to Maori. It was unloaded there by a bunch of German prisoners. Then it was taken on up to the commandos on this trail.

Chall: By this time you had captured Salerno?

Swent: The town of Salerno was pretty well controlled, yes. But they were now from this point able to interdict the road and keep the Germans from trying to reinforce down from Naples.

Chall: I see. So now you were on your way up to Naples.

Swent: It was a long time unloading this cargo, so I hitched rides up to this little outpost. That was the real front, right there. It was all fairly quiet, no shooting going on. I was up there in the daytime. The soldiers there told me that all the action really was at night. And you could see that it was. They had just finished scrubbing up some tables where they had done some surgery on people who were wounded the night before.

While on the beach at Maori, Lt. Nichols, skipper of British LCI-292, showed me an operation order for the evacuation of the general staff ashore at the southern attack forces beach. Three LCIs and two LCTs (364 and 201, Roger Williams and Strong) being called on to stand by within 1000 yards of the Biscayne, the American amphibious forces flagship, ready on signal to evacuate General Mark Clark and his staff from green beach, but the signal never came. All other LCTs were ordered to quit unloading work at

the time and stand by at anchor. This was at the time I had the wire fencing on one of my propellers.

I took the craft back down to the landing beaches, and continued the unloading work. Eventually we got set up to unload in the harbor of Salerno itself and tied up there.

[1][At midmorning on September 24 we were on red beach at Paestum being unloaded of a cargo of miscellaneous army equipment. I took a walk ashore and passed a three-star general who greeted me when I saluted him. After passing him, I turned to see who it was and it was General Mark Clark. I found that he had just come ashore on a Dukw from a ship. I followed him around for a few minutes and soon he was surrounded by a horde of army photographers. Then he stood out on the middle of the beach and watched another Dukw drive up from the south, and who should jump out but General Montgomery! He looked little like a general, being in a pair of khaki shorts and a gray sweatshirt, had no insignia, but was unmistakable with that beret and moustache! A British brigadier general and some colonels also showed up and for a while there was a lot of handshaking, photographing and posing going on, then they all got in a command car and drove off. This turned out to be the famous meeting of the British forces which had landed in Catania across the Straits of Messina from Sicily with the American forces which had landed on the Italian coast south of Salerno.

In the afternoon of the same day we received orders to sail back to Milazzo in a small, empty convoy--LCT(5)s 136 and 434, and LCT(4)s 560 and 619 (British) and the SC 522 as an escort. We picked up a load of heavy duty mobile shovels, a tractor and a 15-ton trailer. We all sailed back to the Salerno area, the 434 being the only one of the four LCTs that had all of its engines operable! We unloaded at a beach on the north side of the town of Salerno, and did some more unloading for a few days.

On October 2 we were sent back to Milazzo, along with British LCT(4)s 560 and 619. The 619 was loaded in Milazzo with ammunition and galley equipment. The 560 (Stanley Pashley, the skipper and Sutton, the executive officer) and 434 were sent out to the island of Salina to take on a load of RAF mobile radar and radio equipment. After we were loaded the 619 joined us there and the three of us sailed for Salerno on the morning of October 7. We had quite an adventure in seamanship, recorded as follows in my diary:

"During my watch it clouded up and a wind sprang up from the south, gradually getting stronger. By the time my watch was over a

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[1]The following paragraphs were added by Mr. Swent.

heavy sea had built up--on our stern, fortunately. It rained three times between 1900 and 2100. I was in oilskins and rubber boots and a sou'wester and mittens--but still got wet. At times we lost sight of the 560 ahead with the naked eye. Fortunately there was some moon out and we were able to see him in the field glasses. Grace relieved me at 2100. Went below and turned in right away.

"Had troubled sleep. I heard the engines stop once--so woke up. After a while they started again, so I dozed a bit--only to wake when they stopped again. A few minutes later Brown came down and told me that 560 wanted us to tow them! It was now 2300 and the wind and sea had developed into a storm of large proportions.

"I dressed hurriedly, put on the oilskins, etc., and went out. 560 lay a couple of hundred yards astern of us. Grace said she had signalled that she couldn't steer. (She had been going on one rudder only for a long time--the other having been torn off by an underwater obstacle on some beach.)

"We backed down close to her port bow--then stopped engines and coasted in close--gunning them ahead for dear life whenever we got too close. The sea was really terrific. 560's bow was tossing like a feather in the air. One moment it would be high above us--half out of water so that we could see all her bottom. Then she would come down with a sickening crash and we would be gazing down over her ramp onto the men in oilskins on her forecastle struggling over the towing cable and onto the vehicles on the tank deck. Another swell would take her up again--and sometimes we would drift under her ramp while she was up and we were down. Then we would gun all engines super-full-flank speed ahead and pray it would be enough to get us out before their ramp and bow would descend on our poop deck--crushing us like an eggshell.

"They heaved us a line--taking several tries to make it. Then we began to haul in on it but the towing cable snagged somewhere and the heaving line broke.

"We backed up close again and after several attempts they got another line to us. They unfortunately forgot to tie their end to the cable and we pulled the whole heaving line in with no cable.

"We backed in close again and heaved the line to them--several times before we could get it over. Once it seemed inevitable that their bow was going to descend on us--and we all scurried from the poop-deck--but their ramp missed our stern by inches.

"During all this time it rained several times--drenching all of us in spite of the oilskins. Once it blew and rained so hard that it was impossible to keep one's face to it, and we had to wait for it to stop before continuing with our efforts.

"All messages had to be passed by blinker--as I couldn't understand their accent amid the roar of wind and sea and my own men yelling and cursing excitedly. Only thing I could get was Sutton's voice from 560 occasionally yelling "Skippaaah", followed by gibberish, at me.

"The third time we got the line across we got the cable all right--a one-inch diameter one. It had no eye in it, so we had to bend figure eights in it on our bitts--no slight job for the strongest of our men--but we finally did it.

"All of the first part of our work was done in the dark--but difficulties got so great that we finally decided that lights were worth the risk and used some. No submarine or enemy patrol craft could have aimed a gun steadily in this sea anyway.

"Once we got the cable secured to our bitts we started ahead slowly to take up all the slack. As soon as any strain other than its own weight came on it--it snapped--closed to 560.

"Now we had to avoid the dangling loose end from getting on our screws. Best thing would have been to cast one end loose and let it sink--but I thought it might be long enough to tow with so decided to salvage it as 560 signalled he had no other. We put it over the niggerhead of our anchor winch and managed to have it in--but couldn't coil it so laid it up and down the length of our tank deck between the two rows of vehicles. The length turned out to be 300-350 feet too short to tow with safely.

"Now we saw two lights to seaward of us. Through the glasses I could see one was a complete set of navigation lights--masthead, range and running lights. We laid "doggo"--engines silent and light off until the lights moved away. This was about twenty minutes.

"We had now spent some three hours fooling around and gotten little good done. 560 signalled us he was underway--for us to stand clear. We did so--asked if he was all right now. He said he was as long as he could stay on this course--330 degrees. We followed closely for a while. The wind had died down--but sea was as bad as ever--and he seemed to be able to steer all right, so I turned in again at 0230. What a night!

"I was at no time as scared as I have been under air attack--but was scared a couple of times. Those of the crew that I called on in this emergency did magnificent work--Haines and Ecker turning in stellar performances. Kresel did excellent work. Colwell at the throttles and Grace directing him did a marvelous job."

The next day I found out that the slight pull we had given the 560 before the towing cable broke pulled her bow around into the wind far enough that she could maintain a straight course without the wind turning her bow.

We proceeded on up to Salerno, and tied up in the small harbor there, but did not unload. The LCT-218 was there with Dr. Cuccinotta, our flotilla doctor on board. For several days Kiger had been suffering from a severe pain in his low back. The sick berth attendant from the 560 had given him a shot of morphine at one point to enable him to stand the pain. We didn't have any so I had been having hot wet compresses put on him. In Salerno I got hold of Dr. Cuccinotta as soon as we could and he examined him and probed Kiger, causing him acute pain. He finally spotted a bit of pus oozing from just above his anus, and diagnosed it as a rectal abscess.

He laid Kiger out on a cot on the tank deck, shaved the area, then proceeded to lance it. When he did, Kiger jumped like a whipped horse and started screaming "Stop! Stop!" and writhed and twisted. Ensign Chase, the relief skipper of the 218, was standing by the cot and held him down, while I tried to soothe him and take the tension out of him. In a matter of three or four seconds, the doctor cut a cross-shaped opening into the abscess with his scalpel, then put it down and seized a pair of surgical scissors and poked them into the abscess and turned them in a scouring movement to loosen up all the pus. He stuck them in at least two and one-half inches. When he first lanced the abscess the pus shot out almost four inches, almost into the doctor's face. At first only pus came out, but after the doctor twisted the scissors rapidly a couple of times, blood started to flow out. That was all there was to the operation. It had only taken some five seconds at the most, but was most deftly executed on the squirming body. He gave Kiger a large shot of double strength medicinal rum, dressed the cut, and in a half hour Kiger was feeling better than he had in four days. The doctor hospitalized him on shore for a few days while the abscess healed from the inside out, and Kiger later rejoined the LCT in Naples.

Our load of RAF equipment and people were not wanted in Salerno, so we and the 560 were sent on to Naples, which the army had now entered. The 434 was the first American LCT into the harbor, but there were already a number of British LCTs working there. A few days later some more Flotilla 9 LCTs arrived, and before long the place was crowded with twenty-two of them.}[1]

In Naples--let's see, I think we went in in October, October

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[1]End of added paragraphs.

10 or so--and fiddled around in Naples, generally speaking, just getting reorganized. There was a lot of damage done to our LCTs and other craft at the Salerno beachheads, and they tried to get some quarters for crew and some repair facilities erected in the port of Naples, in the harbor. We were there for quite a few weeks, unloading ships and getting repaired. Our relief crews were sent back to Bizerte, except for the officers. The propellers and strut bearings on the 434 were in bad shape, so I arranged to be allowed to move to a shallow canal in the harbor called Canale Pollena and ballast our bow down so as to raise the stern out of the water. The canal was filthy with oil, sewage, and odd things floating around. We changed our drive shafts and strut bearings and fixed up the propellers. Grace and I did most of the initial work. The shafts were for Manitowoc design LCTs and had to be cut off four inches and then drilled and milled. We found no one place that could do those things so dragged the shafts around from one ship to another and to an army shop! We were sent back to Bizerte by way of Palermo, in late October.

One reason for bringing us back from Naples to Bizerte was to be able to reorganize flotillas. A third flotilla, Number 11, was now part of our forces, and had mostly 400 series LCTs. Some bright person got the idea of transferring the few 400 series LCTs in flotillas 9 and 10 to 11. At first the crews were to be transferred with the boats, but the paperwork for this got to be too much, so we simply traded LCTs and moved the crews from one LCT to another. I exchanged LCT-434 to an Ensign Cohen, who had only been in the Med about four and a half months, and had not been at Salerno, for the LCT-224, which was in good shape, except dirty. Our whole crew was pleased at the change, but I parted with the 434 proud of our record of nine and a half months of hard service after having been classified as "unfit for action" back in Oran.

The Anzio Campaign

Swent: In Bizerte they were sending LCTs to Oran to be loaded by crane into LSTs going to England. I was at one point scheduled for that, and then at another point it was cancelled. Then I got sent back up to Naples. This was in early January. And eventually what this led into was the Anzio landings. A lot of the LCTs had been sent around to England, but much of our particular group was still there. We were a reorganized Flotilla Nine. Harry Souchon got transferred to a shore job. The rest of our original division were involved in the Anzio landings. Before being sent back up to Naples we were given new relief crews--six enlisted men, most of them with several months of LCT duty. We made one nighttime practice landing with tanks north of Naples, and all went well. We loaded for the real landing at a town called Castellammare di

Stabia, which is just south of Naples on the north side of the Sorrento peninsula, almost the identical place of Maori on the south side, right where the peninsula comes into the mainland.

We loaded up with our load for the landings at Anzio there. Our load turned out not to be assault material, but supplies--150 tons of blankets, sacks for sand bags, stretchers, 80 and 87 octane gasoline, diesel oil, 25-pounder shells and cartridges, land mines, demolition charges, barbed wire, engineers trusses and beams, and other miscellaneous items.

We then had to cruise around the Sorrento peninsula back to Salerno where a big meeting was held to outline the operation. There was no operation order issued again. It was just in this one big meeting where they gave us our orders and what we were going to do. One new feature was that the naval force would be accompanied by two destroyer escorts (DEs) that after Salerno had been fitted with a great deal of radio equipment and could jam the frequencies used by the Germans to control their glider bombs. Our particular group of LCTs was to be escorted by a British trawler and a motor launch.

One of the problems with the LCTs was we didn't have good navigational equipment. So they always had us led by somebody that had better navigational equipment. But most of those people that led us didn't understand our problems. I tried to tell this British trawler skipper what our problems were. I had quite a problem with him. The whole LCT convoy was to consist of seven U.S. LCT(5)s, two British LCT(2)s, two U.S. tugs each towing an LST pontoon, and one British balloon tender. The operation order called for LCT(5)-140, Dean Shervey, to lead the group. The trawler skipper said his job was to protect us, not to navigate us! He was going to cruise on our quarters, but finally compromised and agreed to cruise in front of us, but zigzagging five minutes one way and five minutes the other way while we tried to follow on a straight course.

I suggested that the two British LCT(2)s be put in the lead because they could navigate better, but he wouldn't agree to this because that wasn't in his operation order. At the last minute Shervey told me his compass was broken and he couldn't steer any set course, so when the convoy started I simply took his position even though the trawler skipper might object. At the last minute before leaving Salerno, we had two British army officers and forty-nine men loaded onto us. They had no idea of where we were going or when! I included their officers in the briefing I gave my crew once we were under way. It took us about thirty-six hours of slow cruising (five or six knots)--two nights and a day--to get to the Anzio area.

One problem with the trawler was they kept going too fast for us. Then they would slow down and wait for us to catch up and that sort of thing, which works all right in the daytime, but it doesn't do well in the dark. They never did zigzag. And somehow, on the way up to Anzio, the trawler skipper got lost. (He admitted this to me later.) He didn't see the reference vessels when we went by them, and took us almost all the way to the mouth of the Tiber River. By then I got very antsy and was questioning things. We turned around and came back and finally found the area where the landings were and went on into the beach area.

But we were again a couple of hours late. We had achieved absolute complete surprise at Anzio. My landing beach was north of the town of Anzio, and it was a very cloudy overcast day, but the beach was too shallow for LCTs with cargoes, so we were kept waiting for several hours before being called in to load. In the meantime, long distance shelling of the anchorage area began and went on intermittently all day. I saw several LSTs get hit while we were near them. When we made our landings the water was calm, but we stopped on a sand bar about 100 feet from shore. The Britishers waded off and sent DUKWs to unload us. While on the beach we were dive bombed by a single plane. The bomb landed about 100 feet off our starboard quarter, and about twenty-five feet astern of the LCT-340, next to us. I jumped into the pilot house just as a piece of shrapnel landed where I had been standing. Grace's helmet was grazed by another piece.

Then the weather began to pick up and got choppy, so all the LCTs were sent down into the harbor of Anzio on the third day. The town had been taken right away. There was a little protection from the weather by getting around the breakwater there. So we went in there, and the weather developed into a very nasty storm. One of the problems that came out of this storm was that many of the LCTs anchored with very short cable. They held the cable almost vertical when they anchored. As a result of the wave action they would be bucking up and down and putting a tremendous strain on these cables. A lot of them broke their cables, lost their anchors and then were washed up on the beach sideways and were basically out of action.

I had had enough experience that I let out a lot of cable when we anchored and had the cable almost horizontal. This puts much less strain on it when you go up and down. So I didn't lose mine, and my LCT was one of very few survivors of that storm there.

Since the 224 was one of the survivors of the anchor losses, I was available for doing lots of work. I did a lot of unloading there when the weather was kind. We were shelled periodically from long-range guns of the Germans. But we had no hits. Had some very

close calls, though. And we had a number of air raids for at least the first few days. They were pretty constant.

[During the first month at Anzio, before the rotations to Naples began, I went for a long period without bathing--in fact, without changing clothes much of the time. I slept in my clothes because of the shelling and bombing--not wanting to get caught undressed at the time of some emergency! As a result, I began to itch a lot and this finally developed into a skin disease called "scabies" (a fungus related to athlete's foot) which was hard to cure--I had to either bathe daily and use benzyl benzoate as a soap or to cover myself with sulfur in a petroleum jelly. The benzyl benzoate was more effective, but stung terribly when applied. The sulfur treatment was less painful, but messy and I had to wear "long johns" with it. I had to use it because the navy pharmacies ran out of benzyl benzoate.

For a while in February I got conjunctivitis in my right eye, and had to have a patch put on it for quite a few days. This made judging distances very difficult, but after the first day I adjusted and allowed for that. Some people thought I had been wounded in the eye by shrapnel! One who thought so was an army colonel that I passed one morning when walking in the Anzio mole. He stopped me and launched into a long speech about my courage and about how we needed more people like me. He got so far committed along this line that I didn't dare tell him that all I had was "pink eye", and simply thanked him for his thoughts.

One day late in February we were assigned to unload a liberty ship named Ashe and were on our way out to her when another liberty ship, named Taylor, sent us a blinker message asking us to unload her. We replied that we had been assigned to Ashe. The Taylor then sent a blinker message saying, "We will feed your crew cinnamon buns if you will unload us!" This didn't seem to be worth disobeying our orders, so we didn't accept!][1]

Then after about two weeks things settled down and were fairly routine. After a month we even established a method of rotating the crews, where half the crew would go on an LST down to Naples and have five days off in Naples. The other half of the crew would handle things. Then we'd exchange and rotate.

Chall: You still had your double crew or your extra five men?

Swent: Yes. We still had seventeen people, so one officer and eight men could handle it. So Frank Grace and I alternated going down. And

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[1]Paragraphs added by Mr. Swent.

this kept on until early April. Let's see, the landing was on January 22. They finally broke out, I think, sometime in May and joined up with the main army. So the beachhead lasted a long time. In March Lt. Mel Olsen gave us forms to fill in summarizing the trips and loads taken while unloading ships.

A Change in Command

Swent: Then I was given personal, verbal orders by Lt. Commander Freese to turn my landing craft over to Frank Grace and return from Anzio to Naples for orders and transportation to Palermo and there receive orders to be returned to the U.S. On my way through Naples I was to help organize a group of eighty enlisted men just arriving from Palermo to be sent to Anzio to relieve men there who needed to be replaced.

Chall: What a surprise!

Swent: Yes, but a lot of people expected this, or to be shipped to England, because we thought things were over in the Mediterranean.

When I left Anzio the only LCT(5)s there that had been there since D-day were the 224 and 228, out of thirty-seven that made it on D-day. All the others had at some point been broached, hit by bombs or shells, or damaged in the unloading work to the point that they were towed to Naples for repair. Grace very much wanted to beat out the 228, which was now operating on two engines, but about a week after I left they were tied up alongside an LST and in the surging together from wave actions one of the big exterior bolts holding the aft section and the mid-section of the LCT together got poked through the LCT side, allowing the engine room to be flooded, so she was towed to Naples, leaving 288 the survivor. She was towed away two days later, something over sixty days after D-day.

I left Anzio on March 10. In the morning as I was walking on the mole into town, I passed Admiral Lowry (Rear Admiral, Commander 8th Amphibious fleet) making a tour of inspection of the mole and town. His chief of staff, Captain Opie, stopped me and asked what craft I was from, how long I had been there, how many times we had broached, etc. When the admiral heard that we had been there with the LCT-224 since D-day, that we had operated continuously, and had never been broached, he gave me a nice talk about its having been good work, that such things didn't happen by accident, and that although we perhaps had not been able to see the picture of the operation as a whole, we had, nevertheless, been a very important wheel in it, thanked me for the job we had done, and said to keep

it up. Naturally, I didn't mention that I was planning to leave in a few hours!

Of the LCTs that I ferried to New York, 17 was burned at Salerno, 21 was blown up at Oran, and 36 sank after being dashed on some rocks near Naples in a storm being towed back from Anzio.

[1][While in Naples I wrote up and submitted to the Flotilla 10 commander my action report. It was extensive, typewritten and accompanied by two pages of strongly worded recommendations. I attached the trip and tonnage forms Olsen had given me. I asked for a letter of recommendation to be written from the Flotilla 10 commander or higher authority to Frank Grace and each of eleven men as I thought they were entitled to more recognition than the second hand account I gave them of Admiral Lowry's talk to me. Several of my recommendations were adopted later.

I took a minesweeper out of Naples to Palermo. I just barely missed the eruption of Vesuvius. It was beginning to smoke; I could see the tremendous smoking. It was throwing lava 100 feet or so up into the air, and I could see the red glow of a small lava flow down one side. The main eruption came a week later, while I was in Palermo.

Anyway, several of us took the minesweeper down to Palermo, and at Palermo, Lt. Berman, Lt. Commander Freese's executive officer, said our orders were in and he was getting us on a plane to Algiers the next day. We went to the airport, but the plane couldn't land because of a crosswind and went on without stopping.

That afternoon Berman got word from Captain Opie to report to Opie immediately with information on how many officers had gone or were scheduled to go to the States, and how many were en route. From that we got instructions to report to Captain Opie on the Biscayne the next morning. Four of us were involved--Dick Guy, John Rozier, Joe Janusiewicz and me. Opie gave us quite a talk. First he tried to get us to volunteer to stay. He asked us each about our naval experience, whether or not we were tired and worn out, needed rest, etc. He spoke about not wanting to lose experienced officers just before the "Big Game" when there were none to take their place. He reviewed the personnel set up in the LSTs, LCIs and LCTs, saying he had not yet appointed any group commanders or flotilla commanders for the flotilla of new LCTs that was on its way. Dick Guy said he was more interested in the Pacific war, and Opie belittled the operations there, saying they were all small compared to ours. We all admitted to not being tired or needing rest, but no one volunteered to stay. At some point he mentioned the record of the 224 and my action report. Finally, after about an hour of talk, he let us go but said he

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[1]The following paragraphs in brackets were added by Mr. Swent.

would confer with Freese and decide who to use in the new flotilla, and would let us know and, if necessary, he would have Admiral Hewitt, Commander Naval Forces in North African Waters, cancel our orders to return to the U.S., even though we might have our hearts set on going back.]

Chall: Did you?

Swent: Not really. I didn't mind being overseas, because I didn't have any attachments. I was single and wasn't rushing back to get married or anything, or to see a newborn child, which was the position of a lot of the people.

A few days later, our orders were cancelled, and three other officers sent home in our place. The message to Admiral Hewitt justifying this said we were being retained because we had better qualities of leadership--sort of a slap at those substituted for us.

At this time another Alnav came through and I was promoted to full lieutenant.

Under the new arrangement I was to be Commander LCT Flotilla 10 operations and Mel Olsen the same for Flotilla 20 (the new one coming) with Freese to be administrator of personnel for both flotillas. Dick Guy will be group commander under Olsen. Rozier was to be a division leader. Janusiewicz was unassigned but was used as an officer convoy for a while. I went back up to Naples for about a week.

[Then I got orders to fly to Bizerte for a conference with the "LCT type commander", apparently a new position. He was Lt. Commander Kirstine, had known Captain Opie for a long time, and was removed from a new LST for this job. The new setup as Kirstine outlined it was that Flotilla 20 was to go to England, Flotilla 10 remain. Kirstine was replacing Freese, who was to go back to the States, with Olsen as Flotilla 10 commander. Dick Guy, Francis Holmes, and I were his group commanders. The flotilla consisted of forty-four LCTs plus two that might be salvaged. Kirstine was an excellent man for the job--strictly no-nonsense, but one who would listen and understand problems. Then I flew back to Naples.

There I found Freese very unhappy. He took being replaced as a rebuke (and rightfully--for he had been a weak leader as senior LCT officer of three flotillas at one time). To make up for his shortcomings and the poor performance of the LCTs, especially at Anzio, he had made recommendations for lots of medals and awards. He recommended twelve or sixteen people, including me, for the silver star medal, many enlisted men for the Navy and Marine Corps medal, and six LCTs for the Presidential Unit Citation, with 224 indicated as the leading one. I saw a letter to Freese from a

superior officer saying these were "in excess of what is a proportionate share for LCTs."

At one point four of us and Freese talked with a Time magazine war correspondent about Anzio and later he published an article which I still have.

Then I went back to Anzio, on a new and improved LST. I had the operational job of directing the LCTs in their unloading work, and was headquartered on an LCI. Shelling of the harbor and anchorage area still occurred daily, but there were virtually no raids. One of the LCT(5) skippers that I was directing at Anzio was Russell Long, son of Huey Long, who was OinC of LCT(5)-274. Frank Grace predicted a great political future for him after the war. After ten days, I returned to Naples.

Kirstine told me to get my group of LCTs fixed, geared up, crewed up, and ready for operation by May 15 (about seventeen days).]

Chall: Did your understanding, let's say, what to do with a cable and an anchor in a storm get passed on to others?

Swent: Oh yes. Of course most of them had learned it the hard way.

The new LCT type commander was an ex-Coast Guard officer, and he was what they called a mustang, one who had been an enlisted man and over the years worked up into an officer's position, particularly during the war, and come up very fast. He was quite a character, but he and I worked together quite well.

[Olsen got the mumps and was off duty for several weeks, so I became acting flotilla commander as well as a group commander.

At one point Kirstine went to Palermo for a while and left me in complete charge. This included reporting daily to his superior, a Commander Gregor, a regular navy officer with a drinking problem and a terrible temper. One day he got mad because he tried to telephone me at the LCT office and he couldn't get anyone, so he ordered us to start a 24-hour watch in the office beginning that night. That order came so late that I was the only one available to stay there that night. The office (actually a little room on the Naples Mole) had no lights in it, nor a cot or anything to sleep on.

I was scheduled to attend a big conference with Admiral Lowry and Captain Opie on their new flagship, the Duane, so I didn't want to lose a lot of sleep, so when it got dark I took the phone off the hook and left it that way all night because I was afraid Gregor

would call to see if we were following his orders and I figured that a busy signal would satisfy him! Then I went back to my regular quarters and had a poor night's sleep.

The conference the next day was for all amphibious forces type commanders--LSTs, LCIs, LCTs, and others. I was the most junior officer present. Opie announced that he and Admiral Lowry intended to clean up the 8th Amphibious Force and make it like a naval organization. Admiral Lowry gave us a talk on leadership--saying that during the rapid expansion of the navy, new officers and men had not had the opportunity to learn what they would have in peacetime about their responsibilities and jobs, but now that the expansion was slowing down, that we could take stock and try to learn what was expected of us.

The next day Admiral Lowry and Captain Opie inspected the LCTs in Naples. They each inspected half. I accompanied Opie. He was delighted with the progress and slapped me on the back and laughed and said, "Swent, you'll never get home now!" He also said the LCTs were in the best shape he had ever seen them. Admiral Lowry was even more pleased with his inspection. Then they had Admiral Hewitt come down that afternoon for another, but more superficial inspection. We talked him into returning the next day to present eight medals that Admiral Lowry was scheduled to present. One of the medals was a Legion of Merit for me. There were about 100 enlisted men and about twenty officers present. There were navy photographers there and they took lots of pictures, some of which I later got.

The six Presidential Unit citations that Freese had recommended were all turned down. Instead, we each got a letter of commendation from Admiral Hewitt. After the war, a Navy Unit Citation was issued to the LCT-224 for the period I had it at Anzio.

We were still having air raids at night in Naples, and I spent some time in the Naples air raid shelters. After the first time in one, I spent the rest in the doorways of them to get some fresh air.

We did a lot of practice landings in small groups, south of Salerno for several weeks. Then I was sent to Bizerte to become commander of LCT Flotilla 20, to be constituted of LCTs arriving on LSTs over a period of several weeks. One of the new group commanders who came was a Lt. Crist. He was the officer that had the 434 at Camp Edwards but disclaimed all responsibility for the 434's condition.

While in Bizerte I ran into Dale Morgan--now a full lieutenant also and having his own LST, the 907 after having been bombed out of the 158. He said Nevius was in the South Pacific as a division commander of LCIs, also a full lieutenant.

In late June I sailed back to Naples with nineteen new LCIs in my new flotilla. Others were still coming. Again, we went through lots of practice landings with the new flotilla--learning to find reference vessels, identify beaches, not drop anchor too soon, and a host of practicalities.][1]

Onward to Southern France

Swent: Then came the southern France landings. We had a big, formal practice landing in Italy, north of Naples, code named Shamrock. By then my flotilla had gotten some additional LCTs--all of them new LCTs from the States with new crews, new men who hadn't been through any of this before. The new craft were called LCT(6)s, and they were a great improvement over the 5s. Kirstine had charge of all the LCTs, and we had two flotillas. I had one flotilla and Olsen had the other one.

We went on the Shamrock operation after we had already passed out the operation order for the southern France landings, code named Bigot-Anvil. All the LCTs had them. I was on an LCI, and I got a signal from one of my LCT(6)s that he had lost his operation order. And of course, this was a top secret document. By then they were called "Top Secret." I didn't know what to do. I knew that I had to report it very quickly to the admiral, so that I didn't have much time.

So I sent an officer over to investigate and see what the deal was. I had known this officer; he had been around for quite a few months and knew the business. So he went aboard. These were new craft, and we didn't know our way around these. But he went over to see what the problem was. Well, it turned out that they had a little desk on these new LCTs that had a desk drawer that could be locked. He had put the operation order into this desk drawer and locked it. And it turned out that the desk had an apron behind it, between the desk and the bulkhead, and the drawer had no back to it. So when he slammed the drawer, the operation order slid out and went down between the bulkhead and the rear apron of the desk. Later he couldn't find it, and he thought he'd lost it. Of course, he was a

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[1]End of added paragraphs.

new officer, and flustered. I was greatly relieved that I didn't have to report loss of a top secret operation order to the admiral.

Anyway, we set out a few days later for southern France. This was sort of a new type of landing. The beaches had a lot more obstacles on them. They were better prepared by the Germans than the beaches had been before. But of course by then the Normandy landings had taken place. The Allied armies were doing very well in northern France, and the Germans had really pulled all combat troops out of the southern part, and they had mostly service troops there, not much in the way of real resistance.

The night before the landings Kirstine talked to me alone in our quarters on the LCI. He had a dangerous assignment the next day and thought he might get killed. He told me what he wanted done with his personal effects--some were to go to his wife--and several things to tell or write his wife.

Even though they had the shores pretty well prepared and lots of obstacles, we were prepared to blow them up, and we did--we had all sorts of things for this. Kirstine was in charge of a force that was to take in a bunch of LCVPs, lead them in. They were what we called drones. They were loaded with explosives and were radio controlled. They had no crew in them, except the one that he was on. And he was to navigate them into the obstacles, and then from a distance he could detonate them. He was on the same LCI I was on. He did this and he came back roaring drunk, and with a whole string of fish. Of course, the explosions had killed fish all over the place. He was just euphoric that day. He had gotten hold of some liquor somewhere. Of course, any old navy man knows how to do that.

After that the landings were quite routine, no problems. There was very little if any resistance. We landed near a town called St. Tropez, right on the Riviera, a very nice part of the world. When things calmed down I managed to get ashore for a while, and went over to Cannes and visited there. It was very desolate; there was nobody there. It wasn't like you'd find it today, I'm sure.

These landings were in September of '44.

Southern France: Toulon and Marseilles

[Date of Interview: October 19, 1987] ##

Chall: When we left last time you had just got into southern France.

Swent: Well, as I said, the operation itself was very successful. There was very little opposition. After a few days of unloading for the beaches, we had captured and cleared ports and no longer needed the amphibious support. I took two or three days off and managed to hitchhike over to Toulon and Marseilles. There had been some land fighting there. In Toulon, particularly, there were still bodies in the streets that hadn't been cleaned up yet. And the port at Marseilles was absolutely, completely demolished, just like Tunis had been. It had been very systematically demolished. It wasn't a question of bombing. There may have been some bombing involved, but it was very systematically demolished to prevent its being used.

Chall: Dynamited?

Swent: Yes. Dynamited or destroyed so that there was no equipment on the docks at all. It was absolutely razed; all the buildings were flat. Then I hitchhiked back. After a few days back on the LCI I got orders to proceed back to Naples. I returned to Naples and was given orders then to return to Bizerte. I flew back to Bizerte. This was in preparation for returning to the United States. Then I wound up all the affairs in Bizerte, doing fitness reports on all the officers that had been under my command. After I turned those in I was released, and given an order to return to the States.

Return to the United States

Chall: Let's see, this would have been--

Swent: This was September of '44. So I started arranging transportation. I got an airplane ride with what they called the Mediterranean Air Transport. That was the army air transport system for the armed forces. I got a ride over to Algiers, and since I hadn't been to Algiers during the stay in the Mediterranean I took time to stay over. I stayed over there a day, twenty-four hours or so, and I stayed up virtually all night going the rounds. Then I went on the next day to Port Lyautey on the Atlantic. That's in French Morocco, just above Casablanca, about fifty miles north of Casablanca. I wound up there with bronchitis, so I turned myself into the hospital. I was probably just too run-down from trying to do too much in the last couple of weeks. So I had to be hospitalized for about ten days.

Chall: This was an American military hospital?

Swent: Yes, it was a naval hospital in Port Lyautey. After I was discharged from the hospital, then I had to arrange for transportation to the States. There were three possible ways to go. One was a very direct flight, straight across the Atlantic, that brought you into Maryland, near Washington. And another one up through Shannon, Ireland, and then across to New York. And a third one was via Pan American on a charter basis. They had a five-day trip that went down near Dakar, then across to Brazil and then up to Belem, still in Brazil, and then up to Trinidad, Bermuda, and then into New York on a flying boat. And, of course, that's the one I wanted. I was not in any real rush to get back, so I drew the short one! But there was a fellow named North who had been with us. He was one of the LCT-ers there. And he was just dying to get back and get married to a girl that he'd only met about three days before he went overseas. So I arranged a trade with him. He took the short flight; he had drawn the long one. So I got the one through South America.

Chall: Were you supposed to be mustered out, or were you supposed to be reassigned?

Swent: No, this was for reassignment. No, the war wasn't over yet. The trip was very interesting. The first stop was at Bathurst, which is just a few miles south of Dakar on the bulge of Africa. It's right at the mouth of the Gambia River. And it was a British colony at that time, a very small one. But it served a purpose. We had a couple of hours ashore, and then we flew the Atlantic that night. We got into Recife in the early morning, and then landed on the water--it was a flying boat. We had twenty-four hours in Recife. We tied up to a buoy and then went ashore in a little lighter.

While we were standing in the lighter going ashore I happened to stand next to the pilot, and looked down at his briefcase and the name on the briefcase was somebody's first name, I don't remember, but the last name was Titus. And I remembered that name as being--at least a Titus had been one of the pilots who flew into Tayoltita in the very early days. So I asked him if he had ever heard of Tayoltita. He was amazed. He looked around and he said, "Yeah, what do you know about it?" So I told him. We had a very interesting time there.

Chall: Was he related to the Titus?

Swent: He was the same one. I had never met him. I'd heard my folks talk about him, mention the name.

The Pan American clipper had a crew of ten, and twelve passengers,I think. So the passengers challenged the crew to a

softball game. We played the first one there in Recife, and I think the crew won. But Titus damaged a rib. Anyway, from there on we had a baseball game at each stop, and the losers bought the beer for that night.

We finally wound up in New York. It was very nice to get back. I had a little problem as to how to get my diary through. I was afraid if it was found that it might get confiscated because we weren't supposed to be keeping diaries. So I carried it strapped around my body, and I got through all right. There were no problems, but I must have looked awfully fat!

The biggest novelty was fresh milk. All of us returnees just went crazy over the fresh milk there. The USO [United Service Organizations] provided that. Everybody was met with a glass of fresh milk.

Reassignment and Discharge, 1944-1945

Swent: I had a few days there in New York. I reported to the port commander and port director. Then got thirty days' leave and went home to my folks in San Francisco and spent the month out there. I reported back to the amphibious training base in Little Creek, Virginia, which is just outside of Norfolk, for reassignment. I must have spent a month there. This was by now November. There were lots of people from the Mediterranean and from the British channel landings, all back for reassignment.

They now had new, bigger types of LCTs. They had developed one called an LSM. Most of us were assigned to LSMs and then went to the Pacific. I was reassigned to an amphibious training base in Fort Pierce, Florida, in charge of what they called Camp Four. This was a permanent assignment.

So I went down there in early December. It was a big amphibious training base on an offshore island, one of the offshore islands that parallel the coast there, just off of Fort Pierce, Florida. There may be a half a mile of water, sometimes less than that. And we just went over onto the island on a bridge. We stayed in a hotel in Fort Pierce at night, and then went onto the island during the day to do our administrative work.

Chall: You were then a trainer, is that it?

Swent: Well, I had charge of what they called Camp Four, which was the receiving unit. The function of the receiving unit was to receive

all new units that came in, all new men who came in. They usually came in in groups of fifty to a hundred, two hundred, in troop movement size. And they would come in and stay in Camp Four until they were assigned to another camp for their training duty. They would stay two or three days, maybe, that is all, in Camp Four. Then once the units were trained and were ready to be shipped out, they would be shipped up to the Camp Four, to the receiving unit. Then when their transportation came--usually it was a train; most of them left by train--they would be transferred to the train and then go to wherever they had been ordered to go. So it was a constant turnover of people. It was interesting in many ways. My three and a half months on Pier 92 turned out to have been good training for this job.

Chall: Did you sort of enjoy it as a change from being out on active duty, or did you kind of want to be out there?

Swent: Well, I had mixed feelings. I had been anxious to go to the Pacific and see some of the Pacific at the navy's expense. But when I was home on leave I found out that my mother had had some illnesses and had not done very well while I was absent. It probably was better for her that I not be overseas.

My dad had gone through one very trying circumstance when I was in North Africa. My brother knew a boy who was in the Army Air Force, and his father was an army colonel. His last name was Lang. This friend of my brother's was shot down and was missing in action, and word got back to Colonel Lang. The colonel called my dad's office, and Dad was out to lunch or something. So he left word, and the message that my father got was "Colonel Lang called Mr. Swent to tell him that his son was missing in action." And then Colonel Lang went off and retreated somewhere where he couldn't be found to clarify the message.

So Dad tried to trace that down. They got the Red Cross to send a cable to my commanding officer in Arzew, when we were in Arzew in North Africa. I remembered this happening. The commanding officer called me up and said, "Hey! Who do you know in Washington? What are you trying to do, get out of this outfit?" And I said, "What do you mean?" He said, "Well, we just got a cable from Washington, wanting to know where you are, what you're doing." I said, "I don't know anything about it." He said, "Well, I'll send them a letter." Because, of course, cables were always a priority.

So anyway, he sent a letter back. Apparently that took a long time. So two or three days later another message came through with the same result. You know, he said, "What's going on down here? What are you trying to pull here?" They thought I was trying to

get out of the navy or out of this duty or something. Anyway, it was about two weeks before my father got it all cleared up.

Chall: Oh, the anxiety.

Swent: Yes. And he never told my mother while this was going on. He kept it all to himself.

Well, at any rate, I stuck around at Fort Pierce until September of '45. Well, I have to go back a ways. In May of 1944 I was awarded a Legion of Merit medal for actions at Anzio. And in September of '45, after V-J Day, the navy devised what they called a point system for discharging reservists. Of course, people who had enlisted in the U.S. Navy, such as enlisted men, seamen, that sort of thing, they would have to serve out their enlisted period. But for those who were in the reserves, they developed a point system for determining who was to be released first. It was based first of all on so many points for each month of service, and then so many points for each dependent that you had. I didn't have any dependents, so I didn't have very many points. But they did give unqualified discharge to those who had earned medals in action. They had to be medals in action, not for administrative work. So mine qualified and I immediately asked for the discharge.

At some point I had considered staying in the navy, thought it would be fun to stay in the navy. But the experience at Fort Pierce, where I began rubbing some elbows with regular navy people and got back into the spit and polish routine and this sort of thing--I could see what peacetime navy would be like, and I decided that I didn't really want to be in it.

So they sent me down to Miami for final discharge, and I was discharged in Miami in late September of '45. I drove up with Mel Olsen whom I had known ever since the Tower Hall days. I drove up to New Jersey with him; he lived in New Jersey. Then I went on to New York and visited some friends there. After a few days of visiting there I flew--well, I don't remember now whether I flew or took a train. I probably took a train. Anyway, I came back to the West Coast, and started to live with my folks.

Postwar Trip to Mexico, 1946

Swent: Then, with Philip Klauber and John Dern, (who were old Stanford friends), I started organizing a trip to Mexico that we had talked about for a long time and had had correspondence about. We set it up for February of 1946. And I just spent the time in San

Francisco dieting and playing tennis and exercising. I was way overweight after I got out of the navy. I had been living too good a life and eating too well, and couldn't get my old civilian clothes on. [chuckles]

I took the train down to San Antonio and then down to Laredo and met Phil Klauber and John Dern in Laredo. Phil Klauber had his car, and we proceeded to drive down to Mexico on a six-week's trip. We drove down, basically, to Mexico City, stopping along the way to see the sights, what they were. Then when we got to Mexico City one of the objectives that we had was to climb the mountain called Orizaba, which is a little over 18,000 feet high and is the highest point in Mexico. The only mountain in the U.S. that's higher than it is in Alaska, Mount McKinley.

We decided that we needed a little training for this, that we couldn't tackle an 18,000-foot mountain without some training. So we went out in the area of Toluca, which is some miles to the west of Mexico City, and drove up into some of the mountains there and tried a climb. We had troubles. We got a flat tire and had to change a tire. It was a fairly high altitude, and pumping up the tire was really hard. We all got headaches out of that.

Then another attempt we made at conditioning ourselves was to try to climb another one of the mountains around Mexico City. We went up to the pass on the highway from Mexico City to Puebla. When we got to the pass we parked the car and then started climbing a mountainside to the north, called Telepon. It was snowing and we got into the snowstorm. We climbed as far as we could, just to get used to the altitude. It was around 12,000 feet, I guess.

Chall: Did you have the kind of climbing equipment that you would need for climbing?

Swent: Well, this was not to be really hard rock climbing. Orizaba was just to be climbing up over snowfields. We had researched that enough to know that it wouldn't be any bare rock climbing or anything like that. All we needed were crampons and an ice pick for each one of us. We rented these. We contacted the Mexico City mountaineering club, and they told us where we could rent the equipment and this sort of thing. They were very, very helpful. They told us about a guide that we could get.

Orizaba is not in the ring of mountains right around Mexico City. It's more towards the east coast, halfway between Mexico City and the Vera Cruz coast. So we drove down there and got to the village, Chalchicomula (or Ciudad Serdan) where we were to pick up our guide. His name was Ricardo Jimenez. A fellow named McAllister from the Mexico City club had already sent word to him

that we would be getting in touch with him. He apparently had climbed it quite often and took people up there.

So we made contact with Ricardo Jimenez. We had to leave the car there. We hired some horses and a pack mule and we set off across the country, oh, about noontime. We had a little bit of flat country to go across, and then we started up the slopes of Orizaba. We climbed up to something on the order of 13,000 feet to a place called La Cueva del Muerto (Cave of the Dead Man) where Jiminez said we should camp. Snow started fairly close above that.

We had taken sleeping bags and food. So we pitched camp and then tried to sleep in this cave. I found it very difficult to sleep, with the altitude and in the sleeping bag on this hard ground. I was just not used to it at all. I didn't really get much sleep. I've found for the rest of my life I've always really had trouble sleeping the first night in altitude anyway. We all had the same experience.

We got up at something like 4:00 in the morning. We started out again on the horses. We left our packs and things. All we did was use the horses for transportation. And we went up maybe another 1,000 feet, and then the trail got too snowy and narrow for the horses. So we left them and set out on foot. Very quickly we had to put on the crampons because of the ice and snow. But there were no crevasses or anything like this, it was just very straightforward climbing up through the snow.

Chall: It's not a mountain that's full of glaciers?

Swent: No. So we went on up, little by little. As we got up within--we never really knew at any point how close we were to the summit. We knew we must be getting somewhat near it, but you never could tell the distance. We just got down to where you would put one foot in front of the other and take about five steps and then have to quit and take a deep breath. Jimenez was very patient with us. We would go along and we would stop, we would sit down. Immediately you felt you just wanted to go to sleep. Just about the time our heads would begin to nod he would say, "Bueno, vamanos," in a very slow voice, very slow. Very patiently he kept prodding us along to get going again. We would go maybe fifty feet and do all this all over again. It was just very, very slow going.

Chall: This was all on the second day?

Swent: After the poor night's sleep in the cave., yes. Well, we finally got to the top, slightly more than 18,000 feet. We all of us made it. Phil Klauber's diary shows that I got mountain sick, but I

don't remember it. I remember John Dern getting mountain sick, but Phil kept a written record of it, so he's probably right.

Chall: Phil Klauber didn't get sick?

Swent: No, Phil didn't. Anyway, that was the climax of the day. We took our pictures up there. We had trouble with the pictures because the camera shutters were frozen. We did get some, black and white. But we were all so wrapped up in clothing that you couldn't tell who was who anyway.

Chall: What was it like on the top? You had never climbed to the top of a peak before, I assume.

Swent: Well, nothing like that.

Chall: Was there a real vista?

Swent: Yes, there was a tremendous view. Of course, there were a lot of clouds below, too. You could see down onto the coastal plain and see the mountains inland, although there was lot of lower ground before you came to the mountains. Anyway, then we went down, and going down went a lot faster. One of the things we did was we would just slide down these snowfields. Where there was a zigzag trail we would just cut across between the zigzags and slide down on the snow. It went much faster, and we got back to Jimenez's village that night, spent the night there and then resumed our driving trip the next day.

We went on down to Puebla and Veracruz, through a very pretty place called Fortin de las Flores, which is a great tourist attraction. Little Fortress of the Flowers is what it really means. And it's mostly flower gardens, a very pretty place.

Then we went on down to Oaxaca, to the ruins at Mitla and the ruins at Monte Alban. We also went a little bit south to a town where many of the fancy, very colorful Mexican blankets were made, Oaxacan blankets. We bought some of those for souvenirs.

Chall: Had you never been in that part of Mexico before?

Swent: No, I had not been to Oaxaca before. It was a beautiful town. We stayed in something called El Presidente Hotel, which was right on the plaza. We had rooms with a balcony that overlooked the plaza. It's a very temperate climate there. They had some great, big trees in the plaza. Of course, the national pastime in Mexican towns is to walk around the plaza at night. Young men walk in one

direction, usually, on the outside, and the young women walk in the opposite direction on the inside. They eye each other as they go around.

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We visited the church of Santo Domingo in Oaxaca. It was beautifully decorated. It is supposedly one of the most ornately decorated churches in the Americas. I just kind of went wild taking color pictures of it.

Then we made our way back to Mexico City. We overlapped there a little bit with Larry Morel, who was manager of San Luis Mining Company, at Tayoltita. We saw the Morels and visited with them there for a while. Then we drove on up to Guadalajara and spent several days sightseeing around Guadalajara. We went to the town of Tequila where the principal attraction is to go to the tequila factories where they distill tequila. One of the interesting things is that tequila is made from the maguey plant. They take these plants and grind them up. It's not the leaf; what they take is the base after the leaves have been cut off. The leaves are cut off and used for other purposes. But they take the base of the plant.

Chall: Is the base the lower end of the stem?

Swent: Well, it's kind of like what's left after you peel the leaves off of an artichoke. It's a great big bulbous-shaped thing, that has the root. Anyway, they cut these off and steam them and grind them up and make a pulp out of them. Then this is allowed to ferment in tanks. They had a whole bunch of six-foot diameter, maybe five or six feet high redwood tanks, just dozens of them. They would fill these with this pulp to let it ferment. But if they weren't careful, these solids would settle. So they had to be stirred to keep the solids in suspension.

So we asked them, "How do you do this?" They told us that they agitated them to keep them suspended, and I thought they would have some mechanical way. They said, "No, no, here comes the agitator now." And here came a fellow with a little ladder, wearing a loincloth. He put the ladder down inside the tank where we were and climbed down the ladder and agitated it with his hands and legs, got out and moved the ladder to another tank and did it all over again.

Chall: [Laughter] That's the old way! Now, I'm interested in the fact that they were using redwood in their tanks. Is redwood available in Mexico?

Swent: No, this probably was imported. But redwood tanks are in use all over the world, really. They use them in the mining industry particularly for the big tankage. We had some in Tayoltita in the mill there.

Well, from there we cut back across to the central part of the country and came back out through Laredo.

Chall: The roads in Mexico were probably not terribly good in those days, and automobiles weren't what they are today. Did you somehow manage to get through there in a 1941 or '42 automobile?

Swent: I don't remember what year the car was. It wasn't a new car; it was several years old. The big problem that they had in Mexico at that time was the distribution of gasoline. Of course, in 1938--this was now eight years later--but in 1938 the Mexican government expropriated all the foreign oil fields and formed their government corporation, Petroleos Mexicanos or PEMEX for short, to produce and distribute the oil products throughout the country. Their distribution system was just terrible. They had plenty of gasoline, but it wasn't well distributed. You would run into places where you couldn't buy any. So we took to carrying several five-gallon cans of gas with us and pouring it in when we needed to and then refilling them whenever we got to a place where they had enough gasoline.

It was a presidential election year, so there were tremendous signs all over the place about the election. I think Aleman was running for president, and of course was duly elected. When we got back to Laredo we parted company.

I went to visit my brother and sister-in-law in Orange, Texas, which wasn't really too far away. My brother had married a girl from Orange and they had just had their first child, so I went to visit. She was born in January, and I got there for a visit in early March, I guess it was. I spent a few days there and then I went to Baton Rouge, Louisiana and met Frank Grace. He was doing some graduate work at Tulane, and we agreed to meet in Baton Rouge for a few days. While there we ran into Russell Long in a night club and he greeted us as long-lost friends. At the time he was working on an arrangement to fly tropical flowers in bulk from Mexico to New Orleans in war surplus C-47s. I didn't see him again until many years later when he was in his last term in the U.S. Senate I visited him in Washington. We had a more private visit in his office and rehashed our war experiences. He remembered how poor many of our officers were, especially at Anzio, but said he remembered that I had been a good officer. Then I went back to San Francisco by train. In those days we didn't fly as much as we do now.

V HOMESTAKE MINE: LEAD, SOUTH DAKOTA, 1946-1947

Mining Research Department

Swent: By the time I returned I had arranged for and accepted a job with Homestake Mining Company up in Lead, South Dakota. I had arranged it through Dr. McLaughlin, who was president of Homestake and had his offices in San Francisco. I had known him for many years and had studied with him at Harvard. The idea was that Homestake was going to establish a mining research department; they didn't have one at the time. They did occasionally test new equipment and new things, but they didn't have any real department to do this.

So what they wanted to do with me was first of all run me through, on an hourly pay basis, all the underground basic jobs so that I would have a good idea of what goes on in the mine. This would take about a year, and then after I got finished with that they would set up the research group and I would be a part of that.

Chall: What was the research for?

Laborer, Underground

Swent: Well, new ideas, new mines, new methods, testing new pieces of equipment as they were developed and this sort of thing. That was the idea of it anyway. Accepting this job was a crucial decision to me. After some thirty years of childhood experiences, schools, universities, travel and war I was finally buckling down to earn a living. After the war Dad had gone to great extremes to be sure that I didn't go into mining simply because he had. I probably did so anyway. After the years of mining camp life, Dad's tutoring,

and my university studies, I followed the path of least resistance and went into mining.

So I went up to Lead in March. I arrived by bus; that was the only way you could get in there at the time. No more passenger trains to Lead. I reported in and got put on the payroll and began working underground as a laborer.

Chall: How did that feel?

Swent: It was hard work. It took several weeks to get into shape.

Chall: Even after you'd climbed the mountains. It's a completely different field.

Swent: It's a completely different set of muscles. The first job for everybody going underground as a laborer is what they call track cleaning, which is relatively safe. You're on the main haulage ways, the main drifts, and you just clean up the track where there is spillage from the main ore cars.

I went to work on the 1,100 level and worked for a while doing that sort of stuff. Then after a few weeks I got moved into other things. Eventually I did start running drills. They classified me; each time I went into a new type of work I was reclassified.

I got to be a miner and worked in what they called a day's pay stope, which was where we mined and broke ore. We weren't paid by the tonnage, we were just paid our hourly wages. But it was sort of a training exercise. Most of the ore in Lead is broken by what we call the contract system, where the men are paid by the amount of ore that they break. They're guaranteed their base wages, but they get a per cubic foot rate. If at the end of a month's time they broke enough to make more than their guaranteed wages, why, they were paid the excess. If they didn't, they just got their base wages.

Chall: And breaking it means what?

Swent: Drilling and blasting. There are many, many different types of contracts, but basically it involved the entire sequence of drilling, blasting, and pulling the ore into a car and delivering it in a car. The basic count was usually the number of cars pulled.

Describing the Stopes

Swent: But there were two types of stopes there then: they had shrinkage stopes and square set stopes. The shrinkage stopes were big open things. You mined upwards and as you mined upwards, of course, the broken rock takes more space than it does as a solid, because of the air spaces between the pieces of rock. So you have to pull out about a third of it; you have to shrink the pile of broken rock in order to make room for the people to keep on working in the stopes. Otherwise, after a few blasts you would fill it up and you couldn't get in.

Well, they shrink it by pulling it out at the bottom through a chute. So in the shrinkage stopes they had to survey the stopes to find out what volume had been broken. Men had to stay within the prescribed limits set for the stope for two reasons; one is they didn't want you to be breaking ore outside of there. If there was ore, that wasn't so bad, but it might be waste. And they gave you very precise limits, and they didn't want to pay the men for breaking waste.

The timbered stopes, square set stopes, were between the shrinkage stopes. The shrinkage stopes were forty feet wide and went across the entire ore body. Then they left about a thirty-foot-wide pillar. Then they would cut another shrinkage stope. After all the shrinkage stopes on the level had been mined out, they would start going back in and mining the pillars. These pillars then would have a great deal of weight because they were sustaining all the back with four-sevenths of the ground having been mined out between them. So the pillars had a lot of weight on them and would tend to crack and be somewhat harder to mine. They had to be mined by timbering them.

The level interval was 150 feet, and you would start at the bottom. Square setting is a system where they use, oh, usually 12 by 12 timbers, sometimes 10 by 10s, depending on how heavy the ground is. And these are all framed in a pre-determined fashion so that you can put them together like a bunch of Lincoln logs or something and form roughly 6 foot by 6 foot by 8 foot high cubicles. Each one is completely outlined by posts and caps.

Then you blast out enough space each round to erect one set of timber which would give you this little room. Then you blocked that all up, and then the ore goes down through the floor, unless you put planking on there. Once the broken ore had gone through, then we would put planking on it to work on it. And the ore would go on down to a chute that you had at the bottom. Then you would work from underneath the protection of the timber to drill the next

round. The timber served both as protection to the men while working and also to support the pillar so that it wouldn't completely collapse and become unminable.

At any rate, I worked in some of those. Mostly it was base pay, but once in a while when some contractor would miss work or something, I would fill in. Whenever I filled in I would get paid contract wages.

Chall: The contractor really was an employee of the Homestake?

Swent: Yes. They call it contract, but it really isn't. It's really a piecework type of arrangement.

Chall: Did that kind of experience give you a greater understanding of what it was like to be a laborer in a mine?

Swent: Yes. Oh, this was an invaluable experience for me. I worked with a whole variety of people--practical miners, laborers, pipe men, track men, motormen--and got to know what their personal problems were and what their problems on the job were and how they thought. It was very, very beneficial.

I spent about six months at this, being changed from job to job. Then a special situation came up at Tayoltita, with San Luis Mining Company. They were having a problem. They were going to have an investigation done by a consulting metallurgist, Selim Woodworth, who had been a captain in the navy and was influential in getting me into the navy. They had engaged him to come down and investigate this problem. He needed a translator who also knew something about metallurgy, so they had asked for me. Homestake said, fine, if I wanted to go I could. Technically I took a leave of absence for it. If you are off over thirty days they terminate you. This job lasted six weeks.

Six Weeks on Assignment in Tayoltita: Solving the Problem of Metallurgical Balance

Swent: I had bought a car by then, and I drove out to San Francisco. Woodworth and I went down from San Francisco by train and flew out to Tayoltita.

The job there was what we call doing a metallurgical balance. The mine was both a gold and silver producer. Actually in volume it produced more silver than gold. The ratio was about fifty ounces of silver to one ounce of gold. They were taking a head

sample, that is a sample at the beginning of the milling process, and they were weighing all the ore that went in. They were analyzing the head sample for both gold and silver.

Then they would summarize at the end of the month. They would take all the tonnage being fed to the mill, times the grade of the silver that was contained in it, and also do the same thing for gold, and then subtract the contents of the gold and silver in the tailings. They sampled the tailings when they discharged them--tailings always have a residual value in them. The difference, in theory, should be the production, except for whatever amount went into the variation of the material in process. If the amount of silver and gold in process at the mill at the end of the month increased over what was in process at the beginning of the month, this difference must be subtracted from the difference between the heads and tailings to determine the theoretical production.

Well, they were having a terrible time with this because they were short on silver and long on gold. They were producing actually more gold than this process showed, and not producing as much silver as they thought they should. The metallurgist that they had, named Paul Avery, was an old-timer in the cyanidation business. He had been kicking around Mexico for many years. And he just couldn't figure out what the problem was.

So we started investigating this and that and the other thing. One of the first things we checked on was the head sample, whether it was an adequate sample or not. They had put in a very elaborate sampling system, and we couldn't see anything wrong with that. The amount of the sample that they got was very big. It was a twenty-four hour sample each day, and it amounted to about a ton of fairly well crushed material. They were coning and quartering it by hand, and then taking a quarter of the sample and taking that quarter and crushing it down, pulverizing it, and mixing it as well as they could and taking out about a thirty-gram sample for a fire assay sample. Basically we couldn't really find much wrong with this, although we thought perhaps the coning and quartering process which was done by hand might not be theoretically thorough enough.

So we suggested they substitute a method, to take the whole sample and grind it in a small laboratory ball mill. Then after it had been ground into a slurry, to sample the slurry, which could be mixed very easily in a tub and sampled very easily. Well, they did this, but this didn't really solve any problems.

Then one day when we were going through the assay office, watching the assay procedure, Mr. Woodworth started looking at the slag from the assay process. In the fire assaying process what you do is you take your sample of ore and mix it with a flux and put it

in a crucible and then put it in a furnace, where the mixture of ore and flux gets melted down. The flux contains lead oxide which, when it's melted in the crucible, forms lead. And liquid lead, being the heaviest major constituent, settles to the bottom of the crucible. As it's settling through the molten sample it picks up and alloys with the gold and silver particles in the sample.

Then you pour the molten material out of the crucible into little iron molds. Again, the lead settles to the bottom in the mold. Then after it's cooled, solidified, there's a little lead button down at the bottom. These molds are generally conical so there should be a little cone of lead in the bottom. You generally pound the dark green or brown glass-like slag off. Then you take the lead button and put it on about a one-and-a-quarter inch round cylinder made out of bone ash, with a flat bottom and a cupped top called a cupel. The bone ash will absorb lead and lead oxide very readily.

You put the cupel with the lead button, into a furnace, and the lead button melts and the lead and the lead oxide get absorbed into the bone ash--it's very porous--and it leaves a little tiny button of the gold and silver remaining. You weigh this button and then put it in nitric acid and that dissolves the silver and leaves the gold. Then you weigh the gold button and get the silver weight by difference. You know the weight of your sample so that you can calculate the original amount in the ore.

Well, Mr. Woodworth was looking at the slags and he noticed that at the surface between the slag and the buttons, that there was a little bit of what he called matte. This meant to him that the flux wasn't quite right. There should be no matte. The matte probably had sulfides in it, although we didn't get it analyzed. And if there were sulfides it might have some gold value in it--some precious metal value, anyway. So we fiddled around with the makeup of the flux, changed it a little bit so that there was no matte formed. And we began getting a slightly different ratio between gold and silver in the samples.

In the long run this was the answer to the problems. They had been losing gold in the head sample assay. They thought they were making gold, but actually they weren't. And everybody knew they weren't. But the sampling was indicating that they had put less gold in than they were getting out, and that wasn't really true.

At any rate, after about six weeks of this job I left to return to Lead. Larry Morel who was in Tayoltita followed this all very closely. He had seen my work and everything, so he offered me a permanent job if I wanted it. I told him that I wanted to go back to Lead and see what came out of my arrangement there. So I

went back and got back the first of April. I went back to work and worked for a few more weeks as a shaft man and as a raise man. These were some fairly well-advanced classifications.

Return to Lead, Marriage, and Decision to Move to Tayoltita

Swent: In the meantime while all this was going on I had met Eleanor Herz. She was the daughter of the chief metallurgist, Nathaniel Herz. We had been dating. In late May we decided to get married in June. My year's work had been finished and Guy Bjorge, the manager, said, well, they hadn't put together the mine research department there, but if I wanted they could give me a job as a shift boss or someplace in the safety department. This was really very unsatisfactory to me. One thing, there didn't seem to be any guarantee that they'd ever get this research thing put together. I knew that shift bosses there sometimes were in their jobs for years.

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Chall: So it took a long time before you could work up--

Swent: Yes, progression in Homestake Mine is very slow, because there's very little turnover. People make it a lifetime job there.

Chall: I thought so. I want to discuss that with you.

Swent: I said I couldn't see being a shift boss with as little experience as I had had underground. I didn't think I was really adequate to be a shift boss. I would be more interested in engineering types of jobs. Well, they said, "No, you would be a good shift boss; you would be all right if you want to do that." I decided that I didn't want to do that and I accepted the job in Tayoltita with the San Luis Mining Company that Larry Morel had offered me. So I let him know.

Then we got married. Lee and I were married in June in Lead. We went off, had a two-week honeymoon in Denver. She was doing graduate work at the University of Denver to get a master's degree, and she had maybe another month of work to do. So after the two weeks in Denver I went on down to Tayoltita, and she stayed on to finish her master's degree. And I reported in for work.

Postwar in Lead

Chall: Now before we get into the details of Tayoltita, I want to ask a few more questions about Lead. When you were there, Lead was just beginning to move again after it had been shut down for the war.

Swent: Yes. They had started operation, I think, July 1, '45. I went there in March of '46.

Chall: What was it like?

Swent: Well, there was a tremendous turnover of underground hourly pay people. That was one of the problems they had. They got some of their oldtimers back after the war, but a lot of the people that they got were new. They had been in the armed services and some of them liked mining and some of them didn't. They would turn over. They learned to be mobile during the war, and if they didn't like it, they left. Things were not up to full tonnage because of the lack of personnel.

One of the things they were doing, on which I worked when I first went there, was they were pulling large amounts of rock out of what was called the open cut. Mining in Lead had started right at the surface and had gone down for several hundred feet. It was surface mining before they went to underground workings. Then after many years of going down underground and constantly deepening the mine, they had gone back up and caved a certain amount of the surface workings and had drawn it through a system of raises and grizzlies. It was very cheap rock, because they didn't have to drill and blast it; it just was caved.

There was a lot of tertiary igneous dike material in it. This tertiary igneous dike material was white. These dikes were very white, whereas the ore rock, the Homestake formation, is greenish to purplish, depending on how oxidized it is. And it's very easy to distinguish it, if you can get a clean surface on the rock. So they had a sorting operation going there in 1946, where they had a whole string of these raises and they were pulling rock into cars over screens. They had pickers there who were picking out the dike material and throwing it out and then letting the ore run into the cars. The fines couldn't be sorted so were allowed to go through the screens and into the cars.

Well, they got a lot of fine clay material that worked its way in. They couldn't sort the clay fines out. And this raised Cain with the mill. It was low-grade anyway. But they kept on, and they were pulling 1,000 to 1,500 tons a day that way. It was a three-shift-a-day operation, around the clock. They gave that up

during the time I was working there. They finally quit on it, because it was too low-grade. But it was something they did initially to get started and get some material to work the mill on.

During the war they had not been allowed to process material, but when they were shut down in '42 they had been allowed to pull out as much as the company wanted of the broken ore and process it. They didn't have to pull it all out, and, of course, in the shrinkage stopes they couldn't, or they would cave.

Part of the principle of a shrinkage stope is that you pull approximately one-third of the rock out to give room for people to work. You don't pull the stope empty until you've mined it all out to the top, because otherwise you have no way of getting in and mining on up. These were 150-foot level intervals, and if you've mined halfway up that would be 75 feet. And if you pulled all the broken ore out you had a great big open hole 75-feet high and no way of getting to the back of it to keep on mining upward. So you have to leave the broken ore in to have a platform to work from, to keep mining upwards and to keep the walls from caving. So one of the disadvantages of the shrinkage system is it ties up a great deal of broken ore. But then once you've finished one of these stopes, then you've got a great big stockpile of broken ore.

As I say, the people were very interesting. I worked with some real oldtimers and I worked with some very new ones, and people that were very temperamental. I learned all sorts of ways to dodge work if you wanted to. But I didn't care. I figured I was on a learning process and that I had better work hard. I got a reputation for being a hard worker.

What I thought was the biggest compliment I ever got was, when towards the end, I was put in with a raise man, a fellow named Happy Harrison. And oh, he was furious when I was put in with him. The boss told him before we went underground that day that I was going to work with him, and he was just furious. He was contracting and his regular partner was sick or something and couldn't work. He wanted somebody that was experienced and knew how to work. He didn't want any young college kid in there fouling up his work for him. He was just a little guy, but just a bundle of energy. After three or four days, he said I had done all right and he was satisfied with my work.

Chall: That would have felt like a high compliment indeed. I noticed when I was reading the book on Homestake mines that many of these people, the managers and others, just stayed on their whole lives in the Homestake company, sometimes in a particular location, in

Lead or wherever else.[1] I was wondering, since you in a sense were a management man, and your father had been close to management--still was I guess--whether even in your position as a laborer you did tend to know well these people in the management, like Mr. Bjorge.

Swent: Oh yes, I knew all the top management people. I knew Guy Bjorge, knew him very well. He was a very good friend of my dad's. I could call on him anytime I wanted to. I knew Harlan Walker, who was the assistant manager and his family; they were very nice to me. As far as my social life was concerned, this was all with management people up there. I had a little bit with--I roomed in a boarding house at a Mrs. Todd's. And I boarded next door at Suzy Jorgenson's. There were other people who lived in Lead or roomed at Mrs. Todd's who ate at Suzy's, and I would sometimes have some social life with them. But basically on weekends and things like that I was busy with--oh, the chief geologist, James Noble. I knew they had a son my age. Then Nathaniel Herz was the chief metallurgist. I went down to go through the mill and get acquainted with the mill and got acquainted with him. Then when his daughter came home from--she had been working in the East, and when she came home with a friend of hers they wanted a date for her friend so he thought of me and had me up to the house for dinner. And that was how Lee and I got acquainted.

While I was there they had a union organization attempt. The United Mine Workers District 50 tried to organize the Homestake workers. At the time I was working in drifting with an oldtime drift man who was strongly for the union. He invited me to go down to one of these meetings. I was a little dubious. I went back and posed this to the personnel people. And they said, "Oh no, don't you do that. They might take you to be a management person spying on them and that sort of thing." So I told this fellow, "Gee, they told me I'd better not go down there." "Oh," he said, "that doesn't make any difference. You come on down anyway if you're interested. We don't care."

Well, I did go one night and that was a very interesting experience, too. They were, of course, laying out all kinds of very deceptive information and rabblerousing types of things, and accusing Guy Bjorge of being an evil slavedriver. I knew Guy personally, of course, and he was a fine man. It was just character assassination if it was anything. I got very disgusted with it, so the one meeting was all I ever attended.

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[1]Mildred Fielder, The Treasure of Homestake Gold (Aberdeen, South Dakota: North Plains Press, 1970).

Chall: That was another experience there, dealing with the labor aspect.
Swent: Yes, it was a very interesting experience.

Chall: What about the Kellars? I read about Chambers and Kenneth Kellar. Chambers Kellar sounded like a marvelous character.

Swent: Yes, Chambers Kellar was one. He was an old southern gentleman type. They had a recreation hall there in Lead. I had played chess a great deal, particularly when I was in prep school, in Moses Brown, and had played some down in Tayoltita. Dad had taught me how to play. I went in one night to the recreation building there just to do something and saw they were playing chess. So I went over and watched the chess players and there was one old man there playing, elderly gentleman, and he asked me if I played chess. I said, sure. So he said, sit down, we'll have a game.

So I did, and I beat him. Well, this was Chambers Kellar and he was the champion there. He was the local champion, and this really sent shock waves through the chess community. He took it well and went back and did a lot of studying. About three weeks later, why, he challenged me again, and then he beat me. But from then on we were very friendly. Then later I was quite friendly with his son, Kenneth Kellar, who became the general counsel for Homestake in that area.

But Kenneth was never the same as his father. His father was a very shrewd and yet politic man. He spoke very quietly. He had very strong opinions, but he was very shrewd. Kenneth was kind of a wild man. He just talked very bluntly and very directly, and was very impolitic.

Chall: Well, I gather that his father was quite an interesting man. Dressed in an interesting way, carried himself in an interesting manner.

Swent: Yes.

Chall: How did it feel to be back in a town like Lead after you had been traveling around the world as you had for quite some time? I was just wondering how that kind of town life sat with you?

Swent: Well, for one year, a year and a quarter, it was fine, particularly as I had the punctuation of a trip to Mexico to work down there. So it didn't get too depressing. It could have over the years, I think, if I had just been doing the same thing year in and year out. But I wasn't. I enjoyed most of it. I had to work hard, and I got into very good physical shape, the best shape I had been in all my life, probably, right there. I was very curious. I managed to get a car and I wanted to see all the Black Hills and learn the geology. I just had all sorts of possible outlets.

Everybody was very friendly. As I say, I went down and went through the mill and got acquainted with that. I went to the geology department. I had always heard of Jim Noble anyway; he's a very famous geologist. And I pestered him. He had done his thesis on the gold mine, and he was also, I think, a classmate of one of the geologists who had been at Tayoltita whose name was Phil Chase. He later went with U.S. Steel. Anyway, I had access to lots and lots of stimulating people.

Chall: Yes. You have always gone out of your way to take advantage of any possible stimulation that was available, and I wondered how you managed there. Of course, you had Lee for a while.

Swent: Yes, well, she was just there during the summer and then she moved to Denver to start this graduate year. So our dating was limited to what we called long-change weekends. I was working shifts, and we would change shifts every two weeks. And when you changed from day shift to night shift, you got what they called a long change. You had an extra-long weekend. When you finished the last day shift you got out Saturday in the afternoon, and you didn't have to go to work again until Monday night. We worked six seven-hour days per week. Every other time you changed shifts you had the long change. Then I would drive down to Denver and see Lee.

Chall: You would drive?

Swent: Yes, it was about four hundred miles, about from here to L.A.

VI TAYOLTITA, 1947-1954

Various Initial Responsibilities

Chall: So you went to Tayoltita in 1947. Now, your resume, biography, says that you worked as a mine foreman when you began. What did that entail?

Swent: Well, I'm trying to remember which was my first job. I think the first job they gave me was--let's see, I went down there in July of '47. They gave me a little outlying mine called Santa Rita, which was not connected at all to the main mine. It was an outlying vein that we were developing. I was in charge of this little mine. In essence I was the mine foreman, although I was also acting as the mine engineer. I dictated the practices and worked right under the manager.

Chall: That was Mr. Morel?

Swent: Yes. The main mine had a mine superintendent, a fellow named Dee Peck. But he did not have Santa Rita. That was too far away for him to try to manage, so I managed Santa Rita. Theoretically I had similar status to Dee Peck, but it was not comparable because of vast difference in responsibility.

That lasted for a few months. Then there was another--you'll remember that back in 1941 I had gone to Hailey, Idaho to write up something on the tunneling method that they had devised at the Ivanhoe Mine up there. I had made some drawings and had written up a report on how they were doing their tunneling, because San Luis wanted to drive a new haulage tunnel which was called the 15 level. Well, this project was still going. It had been a long, long project. The man that they brought in to head it up and contract it suddenly got sick and he quit. It was a fellow named Carl Johnson, and he just up and quit.

So they pulled me out of Santa Rita and put me in his job there, finishing up this tunnel. It was just about finished. They had gone through most of the distance. I forget the total distance, but it was a long tunnel. It was something like one thousand meters or something; several thousand feet. They had cut the vein. In fact, I remember when they cut the vein there was high grade mineralized rock. We had a big party that night, because this was a very significant event. They had gone down 300 feet below the last level and gone in under it. This established that the ore was continuous and went all the way through. So this was--we called it "Party Rock."

Chall: Party rock?

Swent: Yes. It was good high grade rock. But they still had to drive the tunnel on far enough beyond that to make certain installations and drive the raise up to connect with the bottom of the workings above, and then begin to develop that level as a mining level; not just as a haulage level but also as a mining level. So they transferred me there and I took charge of the 15 level. Again, this was still not under the mine superintendent, because it wasn't connected up to the mine.

One of the things I had to do was drive this raise 300 feet, which for Tayoltita was a long raise. That was a tremendous raise for Tayoltita. In Homestake we had driven normally 150 foot raises. They did drive them further than that in Lead, but I had never done it. I had just worked in the 150 footers. And this was 300 feet. But the methods were different; the ground was different. And I was on top of it every day. I could go up and climb it and see it and push on it.

One of the problems that I had there was that I got this raise going and they were supposed to also have another raise going right immediately above it, from the 12 level. The 12 was the bottom level and I was to connect under this raise at the 12 level, and they were to drive another raise from the 12 up to the 10. The regular mining crew was just so slow driving that raise, and they only had 200 feet to go and I had 300. I got through first.

So the last few weeks before we holed through I kept telling Dee Peck that we're ready; we're going to get there and you're not going to be ready. I'm going to mess things up by holing through before you're ready. That didn't get too much action. He had too much bureaucracy to deal with, I guess. So I told Larry Morel the same thing, and finally Larry Morel said, "Well, you just go on through and finish it anyway. Let Dee take care of his things. If you damage his stuff, his installations, why, that's just too bad."

So I holed the thing through long before they were ready for it but did little damage to the 12 level installations. Then I started designing and installing a major chute. This was going to be the main ore pass, and for years and years and years all the ore would come out of that mine through this chute, and I wanted to build a good substantial one. I designed one with an automatic air control gate and that sort of thing.

In the middle of it, everybody got worried as to whether I could do the job or not. One day Dee Peck and Larry Morel came through on a visit. I guess when they saw the work they were satisfied that it was all right. But it was a test to see whether I was going to do the job, get the job done or not.

So the 15-level job lasted for several months. Then we had to have a waste pass, and that was another raise, which wasn't much of a problem. I got the raise done. Then we began doing a lateral development in the vein. Then they got another fellow down, another American. His name was MacKey. He was a practical type that they brought in to take over the 15 level. I gave it up.

Then I began working on the changeover from the old 10 level, which had been the old haulage level, to changing over to hauling on the 15 level. Under the old system the ore came out in the ore trains to the surface through the 10 level and was dumped into ore bins. Then there were crushers below the ore bins. Then after the ore was crushed it went into a fine ore bin. From that it was drawn into buckets on an aerial tramway. The aerial tramway conveyed it about 10,000 feet or so, down a very steep canyon to the mill at Tayoltita. What we had to do was stop the crushing operation, stop the haulage and move the crushing plant and tramway terminal to the 15 level. We built up a stockpile first of all at the mill, to get ahead so that the mill wouldn't have to shut down. Then we shut down the crushing plant and dismantled it, moved it down to its new site at the 15 level. And then set up, changed the cables of the aerial tramway over to a new terminal down at the 15 level.

We figured it was about a month's job, so we had to build a month's stockpile of ore at Tayoltita, which we did.

But when we got ready to do it, the job took a little longer than we had thought, particularly in the early stages. There were a lot of things that seemed to go wrong, but we finally got it all done and changed over. Everything went pretty well after we got it changed over. Then, as I said, MacKey took over the 15 level.

Promotion to Assistant Manager

Swent: Then I went back down and they put me into the office in Tayoltita, in essence as assistant manager. I got Santa Rita back again. But we had a Mexican engineer running it, and I would just go out to Santa Rita occasionally, not every day. I generally evolved then into the assistant manager. Larry Morel was away a great deal at the time in Mexico City. Labor negotiations and tax business just seemed to keep him down there almost indefinitely. He would be gone nine months of the year. So basically I was the manager after that. Except he made all the basic decisions and we kept in close touch. There was no telephone, but we did have telegraph and would write letters.

Chall: That was different from the years when your father was manager.

Swent: Well, in his last few years he got to where he was spending a great deal of time in Mexico City. In fact, he was there so much that they bought a place; my folks bought a house down there.

Chall: I didn't realize that.

Swent: You couldn't get anything done except in Mexico City. The union people, all the headquarters were down there. They were much more reasonable than the people in Tayoltita were. Some of them, you know, were very uneducated, the local union leaders, and they would get all upset over some local issue and this sort of thing.

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The experienced negotiators were at the national headquarters of the union. The unions were basically completely government controlled. They only recognized one--theoretically you could have all kinds of unions, but basically they supported one union in the mining business. We tried to have an independent union formed at one time when we took over another property called Contra Estaca, that we got from the Mexican Candelaria Company. The first thing we tried was to have an independent union. That just didn't work at all. We couldn't get the certification that was needed and this sort of thing. We had the legal advice and everything that we needed on how to do it and we tried it. The men formed the union and elected their officers and sent in the request for a charter. All the legal requirements were met, but the labor department just basically sat on it until they could get the national union to send organizers in and change it over so that when the petition came back it was for a charter for a chapter of the national union.

Chall: But there was a union. Those were union shops then in Mexico.

Swent: Essentially, yes.

Changes in Technology and Other Aspects of Mining

Chall: You had been talking earlier about what it was like growing up in Tayoltita, and your father's experiences in the mines, and yours. I just wondered, during the seven years that you were down there, what changes had come about in, let's say, mining technology. You talked about tunneling, that was some change. What other changes were there?

Drilling: Flexible Tungsten Carbide Replaces Forged Steel Bits

Swent: Yes, there was one big change in the early 1950s, 1951-52. The Swedish steel people developed a special alloy steel for drilling with a tungsten carbide insert at the end of it. Now before then, one of the things that was coming around in the United States was what we called detachable bits. In the days when I worked in Lead, for instance in 1946 and early '47, we used what they called forged steel. The steel that you put into the drill to drill with was an integral piece. The bit on the end of it was actually forged on there. At the end of the day the steel would get dull, so it would be returned to a shop where it was put in a furnace and the end of it, the bit end, would be heated till it was red hot and then put in a forge and forged into shape again and then ground on the grindstone to sharpen the edges. This was a tremendous job.

Chall: They did that every day?

Swent: They did it every day. The older drills were what we called carriage mounted. The drill was mounted on a long screw and had a frame on it that you had to support on the column. The column had a jack at the bottom and to put it in place, you stood it where you wanted it, then raised it with the jack until it reached the rock roof, then tightened it with the jack until it wouldn't fall over from the weight or vibration of the drill. Then you clamped the drill on the column or on an arm clamped to the column, and all this was very cumbersome. Then you would retract the drill on this long screw and put in a starter steel, that would be the first one, maybe two or three feet long. Then you would collar the hole with it and then as the hole was drilled you would advance the drill with this hand crank, and the steel would advance into the hole as the hole was drilled.

When you would run the machine right up to the end of this carriage--it normally had about a two or two-and-a-half foot screw--that's as far as you could go with that piece of steel. So you would run the drill back, take that piece of steel out, and replace it with a piece of steel that was maybe two feet longer, and then run that into the hole and then start drilling with it. You would drill another two feet with it, and then you would retract and put in the third steel.

And usually in hard ground, like in Lead, just drilling one hole would take all the edge off. Well, it would do two things. It took the edge and what we call the gauge off the steel. The gauge was the diameter, and of course the rotating in hard ground would wear the diameter down so that the bit got narrower in diameter. So each succeeding bit had to be slightly smaller to go in the same hole, and all of these had to be taken out at the end of each shift and reforged.

Say for a day's pay you were supposed to drill six or eight holes in a stope. Well, if you drilled eight holes and each one took three pieces of steel--in a stope it would take four pieces of steel, because you drilled longer holes there--so that would be four times eight, thirty-two pieces of steel that had to be lugged in and out of the stope, put on a car, taken back to the shaft, hoisted out of the mine and put on the car again and transported down to the shop. Then another set had to be put down in the mine so that they would be ready for the next shift and another for you the next morning.

So what was happening in Lead was--well, it was happening all over the world. Lead was very backward on this. They moved to what they call detachable bits. Instead of forging the bit end on the steel, they put a thread on the steel and then made the bits with the same thread, and you could screw them onto the steel. They originally started with what they called throwaway bits. You just used them once and threw them away. They were too soft a steel and they weren't worth regrinding.

But then the next development was to use better steel, and then you saved the bits and reground them. The one that had been used as the starter bit before would then become maybe a second bit because its gauge had gone. It would be the second bit the second time and then maybe a third bit, and so on. Then all you took into the mine was a wire with a string of bits on it. It was a lot easier than carrying all the steel in. And you kept the steel in the working place. You had to have spares because occasionally a piece of steel would break, but the detachable bits were a great advance.

Basically the old steel, the drill was just carbon steel. It was somewhat brittle; you couldn't bend it. If you bent it very much it would break. The Swedes came along with an alloy steel that was very flexible. You could bend it a great deal. They put a tungsten carbide insert tip on it, and they went back to integral steel. One of the developments in the detachable bits had been to put on tungsten carbide inserts, which were very hard. They could be reground and used over and over again.

Well, the Swedes went back to integral steel, but with a chisel bit instead of a cruciform bit. Most bits were cruciform. That means they had four cutting edges. Drill steel always has a hollow hole down through the center, and the bit has a hole in it so that you can inject water through there. That settles the dust that's made in the hole, to keep the dust hazard down, particularly in siliceous ores.

The use of the flexible steel by itself was great, because you could use this steel over and over again. But the real thing that it made possible was the use of a type of drill called a jack-leg drill. This meant that you could use a smaller drill and mount it on a jack-leg, instead of putting it on these cumbersome columns that took you an hour to set up to drill with the old Leyner drills. They were the fixed drills. They were very heavy; they'd weigh 150 to 200 pounds apiece, depending on the make and type.

The jack-leg drill, instead of being mounted on the column, was mounted on a pneumatic leg that you could control. And it pushed the drill up and down. You put a steel in its chuck and let the air leg move the drill and the steel up to where you wanted to start your hole. You had the controls right there, and you started the drilling. The jack-leg drills were probably two-thirds of the weight, and you didn't have to fool around with all this mounting. The gauge losses were much less with the tungsten carbide bits, so you could drill smaller holes to begin with. You didn't have to drill the great big holes that you'd have to start with the old integral cruciform bits. So you could use smaller sizes of dynamite.

And this was a tremendous revolution. A man's productivity increased tremendously with this. The number of holes a man could drill, the footage a man could drill and blast in a day was really increased greatly. This swept the world, really. I had heard about some of these, that the Swedes were over in the United States doing demonstrations.

So one year when I was out here on vacation, I think in 1951, I heard that they had these type drills at the New Brunswick mine of Newmont in Grass Valley. They weren't on demonstration; the

Swedes weren't demonstrating them. They had already done that. I arranged to go up there on a visit and see these drills and the steel, how they work. So I did. I went up and spent a day there. I was very impressed with them.

So when I got back to Mexico I thought that we should try them. We arranged finally for a company called Atlas Copco--that was a Swedish company that made the drills and the steel--to come out and give us a demonstration. We eventually converted to them. We had some labor problems with them. The drillers liked them, but under the old labor contracts we had set up certain minimums that they had to do, and this sort of thing. These were out of date and we had to renegotiate and change them all. That was a real headache, but we eventually got it done. The men much preferred them, because they didn't have to work so hard.

It was strange. Up in Lead there was a different mentality. They did eventually go to jack-legs, but there were many of the oldtimers who had just been using the Leyner drills for so many years that they wouldn't change over. They just insisted on using them, and they used them until they wore out and had to be replaced and then they got a new type one. Generally by the time this happened the oldtimers were even older and ready to take less active jobs than drilling, so they did this many times rather than learn to run a jack-leg.

Chall: So you really broke ground.

Swent: Yes, well, that was a real revolution in small and medium sized underground mines. In the question of ore handling and mucking machines and that sort of thing, there weren't really any significant developments in my period there.

Chall: What about the mill? Was there anything different about that? Of course, milling is almost all chemistry, isn't it?

Swent: Yes, it's a combination of chemical engineering and materials handling. You have to handle all this rock and break it down and pulverize it and slurry it and then do the chemical treatment.

Chall: Did anything change there?

Swent: Not really, nothing in principle. The company had made the change in the assaying that Woodworth had recommended. One of the reasons why this assaying problem came about was that in the earlier days, my dad's day when he was there, they had always had a college graduate as an assayer. An American college graduate would come down and be an assayer. They generally stayed about three years. This was the conventional overseas contract in those days. Then

usually they would leave because they didn't want to be assayers all their lives. But they at least had the education to cope with changing conditions, if the ore changed or varied.

Well, the Mexican government began putting limits on how many foreigners you could employ. So gradually they began cutting down on the number of foreigners. Actually, the last foreign assayer they had there was Swiss in origin. Then he finally retired, so they made his assistant, who was a local Mexican boy, the assayer. He had been there for years, he knew everything and knew how to do it all. But he didn't have the education to cope with any significant changes in the ore, such as changing the flux, which a good assayer should be able to do. He was just one who was doing it by repetition. At any rate, that was why they got into that jam.

Chall: Oh, I see. So how were you able to handle that afterwards?

Swent: Well, I didn't.

Chall: You just had to cope with the fact that he couldn't handle it?

Swent: Unless he made an exceptionally large mistake, you couldn't see many inadequacies in the results. As long as our recovery stayed high and our metallurgical balance was reasonable, we didn't worry about the assaying. Every once in a while we would have recovery problems and would start checking lots of things, including the assaying. Usually the recovery would get back to normal in a few days without our having been able to find out why it had changed.

Chall: I see.

Swent: They didn't change the assayer. He stayed on and he was quite willing to do what he was told to do. But he didn't have the technical education to figure it out for himself.

The company also trained surveyors, and a mill superintendent. An Italian-born, Mexican-naturalized citizen named Guillermo Bovio first worked for us at Guanacevi. When that shut down he went to the Homestake Manganesa venture in Mulege, Lower California. From there he came to San Luis in Tayoltita. He was an excellent civil engineer and spoke both English and Spanish very well. He decided to train the surveying assistants, who were local Mexican boys, how to do surveying. If they agreed to be trained, he first taught them basic trigonometry. Then he began to show them how to use the surveying instruments. He was very patient with them and in two or three years began to let them do some of the surveying, and before long they were doing it all and he was occasionally checking their work. These boys stayed in those jobs for years and solved the

problem of having to reduce the size of our foreign staff. They also became excellent draughtsmen, producing beautifully finished maps and drawings, beautifully hand-lettered. Their long tenure also solved the inefficiency of hiring new foreign technically educated surveyors every three years or so, and having to teach the new ones how to get around the complex mine and the inefficiencies attendant on their usually not knowing Spanish. In the long run they turned out to be more reliable, cheaper, and efficient than the periodic "imports."

A similar success story is that of Francisco (Frank) Beltran. He was a taxi driver in Mazatlan for a number of years. His English was a little better than the other cab drivers and he was unusually reliable, so that all of us traveling through Mazatlan always tried to get him if we could. Larry Morel finally offered him a job in Tayoltita, so he gave up the taxi business and moved to Tayoltita. In a short period of time he became a shift boss in the mill. Our metallurgist and mill superintendent was an American named Bob Woods. Under Bob, Frank worked up to be mill foreman, and in a few more years assistant mill superintendent. When Bob resigned and left, he was replaced as mill superintendent by Frank Beltran, and we got along without the services of a metallurgist on the theory that over his years of experience Frank had had to deal with all the variations in our ore that might be expected and knew how to handle them. He was mill superintendent when Lee and I left Tayoltita in May of 1954 and continued for many years after that until he retired.

One earlier mill shift boss was named Rodolfo Perez. When he wanted to retire from mill work, Dad put him in charge of a small printing press that San Luis installed in the basement of the office building. Rodolfo used to bring his twelve-year-old son, Jose Jesus Perez Osuna (nicknamed "Pepe") to this shop to help him, so Dad got to know him and recognized his willingness to study and work, so he helped Rodolfo send Pepe to school in California so he could learn English. This he did well and later came back and worked in the office as a bilingual secretary, and was extremely useful to Larry Morel, to me, to Don Marino Cordova, and to those who followed us, finally becoming a highly trusted key employee.

Obtaining Timber, Water, and Power

Chall: You had to get a lot of water and use a lot of water and timber. Did anything change about the water power and timber needs and the way that you obtained them?

Swent: Well, it got worse. Everything gets worse in Mexico. The timber got further away, of course. That area had been mined since the 1700s, and all the good local nearby timber had been stripped away. And the other thing that had happened was, under the more modernistic government they had, the timberlands were very controlled. You had to get all kinds of permits to cut timber and then to sell it, and it was a very controlled business.

There were two types of timber. We used a lot of pine and then we used a lot of hardwoods. They came from different parts of the country. The hardwoods came from down towards the coast. They were very difficult to get, to get the permits. The hardwood was generally small in diameter, generally maybe six inches in diameter at the most. If you got seven inches, that was pretty big. But it was very, very hard, and very, very resistant to fungus, and very, very strong. The pine was much easier to work. You could cut it, you could shape it. These hardwoods were just terrible to try to cut and shape. You really just sawed them off to the right length and then put them in and wedged them in place and that was it. You didn't try to do any fancy joints or put bolt holes through them or anything else.

I remember I arranged to get two 12 by 12s of a very hard wood called Mora for the ore pass chute that I was putting in on the 15 level. I needed a few holes drilled in it, and it took a carpenter days to put these holes through with a hand auger; literally, days. He had to pour water in the hole to cool the bit off and everything else. But they worked well, lasted for years, once we got them in.

The pine we used for ordinary chutes which didn't have to last for years. We did have a lot of fungus and rotting, and the pine wouldn't resist that at all. So we would use the pine in places where we didn't care if it lasted; as long as it would last a year or so it was all right. Beyond that we wouldn't care.

The water problems--the mine itself didn't make much water. It would make a little bit in the rainy season, through cracks that went up through the mountainside, but basically it was a dry mine. The veins had lots of open space in them and as the mine was deepened we found that this open space was usually full of water from surface inflow. Sinking down on the vein was a somewhat wet job, and driving the drift for a new level was the same, but in a matter of weeks all the water would be drained up to the old upper level, and all following work on that level would be dry.

Controlling water underground was something else. There were pipes all over the place. Maintenance on the pipelines was always a problem. We had both compressed air pipes and water pipes.

Keeping leaks down and keeping the pipes from getting damaged, all of that sort of thing was a problem.

Chall: That was the same for all the past generations, I presume? Nothing much changed.

Swent: Well, as the mine got bigger, longer, it became more of a problem. We had educational problems. For instance, this 15 level was several thousand feet long, and we had to carry our own pipes for air and water in there, because it wasn't connected to the main mine. When I turned it over to MacKey, he was a practical type. And after a few weeks he began to complain that the drills weren't any good. The drills just wouldn't perform any more. We needed a new set of drills.

So Larry Morel sent me up to investigate why. I went out to the face, and sure enough, the drills were just barely chugging. So I checked the air pressure and the air pressure was very low. I told him, "Your air pressure's low." I looked around at the pipe, and all it was was two-inch air pipe. We had been carrying four-inch air pipe before because the larger the diameter of the pipe you have that the air goes through the less friction loss there is. It's just like water. Moving compressed air creates friction, and the pressure drops. He had been installing two-inch piping. He had installed about one thousand feet of two-inch pipe instead of four.

Anyway, his pressure was way down. I said, "Your air pressure's low." "Oh," he said, "I can fix that." I said, "What are you going to do?" He said, "Oh, I'll put in smaller pipe. The smaller you make the pipe, the higher the pressure." So I said, "No, that's just backwards. You've got to put in bigger pipe." But we had problems of that nature.

Chall: I see. You had to be on top of it all the time.

Swent: Yes. And that was an American who had had years of mining experience. But again, that's practical. He had had no technical education.

Now we had a mine site where people lived, way up, five thousand feet high. The town of Tayoltita was at about 1,500, but we had built employee housing way up there. And we had to pump water all the way up there. But that was not a significant problem. Of course, the water was always hot. There never was cold water up there. The pipeline was just laid on the surface, not buried, so it got plenty hot in the sun.

Chall: Did you have to separate domestic drinking water from water that was used in the mines in some way?

Swent: Yes. At the mine, at a little camp at 4,500 feet where a few staff people lived, we had two water systems. We had one for bathing, and that was just the water that was used to cool the compressors. We had a little oil in it. But it was warm, and we used it for warm showers. Then we had water in the sink which was drinkable. It was a drinking water system.

Down in Tayoltita itself we had a company potable water system. And the town had its own system. The water actually came from the Piaxtla River. At Tayoltita we had a well that was upstream from the mill. Then the water was pumped up into a water tank that was above the colony where the staff lived. Then we also had a tank over at the mill site for feeding water to the mill.

I don't know if I mentioned that one time somebody got worried about the quality of the water. And they didn't know whether there were bacteria in the water or what. So somebody said, "Why don't we take a sample of the water and send it up to some water sampling company, water analyzing company, and see what they think of it." So we took a sample and sent it to--I forget who it was. But we sent it to somebody that was in the water purification business. And they came back with a long analysis and said the water has this, this, this; all these things in it. It was all gobbledygook to us. We didn't know what it meant. And they said, but if you want it, we can furnish you this and that type of chlorination system.

Gee, we didn't want to really get into chlorinating the water. That would be a tremendous maintenance problem and something that you would be saddled with forever. But here these people were recommending it, so what should we do? Well, we had a fellow there named Bert Brown who was our master mechanic and also the airplane maintenance fellow. He said, "Well, why don't you take another sample and send it to the Los Angeles Water Department? They'll analyze it, and they're not selling equipment. See what they think of it."

So we did that, sent them another sample. It came back and they said, "This is one of the cleanest waters we've ever analyzed." So that was the end of the chlorination.

[Date of Interview: October 30, 1987] ##

Chall: I think we were talking about various changes that had taken place in the industry, in Mexico at least, from the time that you had left it and were returning, and during those seven years in which you worked at Tayoltita. We were talking about obtaining water, power, and timber last time. I think we finished that. I don't think we talked about power, did we?

Swent: Okay. Well, the first source of electric power for the operation had been a small hydroelectric plant right in the Piaxtla River, just below the town of Tayoltita at a place called Tapacoya. There was a masonry dam built across the river, just eight or ten feet high. (This may have been built in the 1860s by the La Abra Silver Mining Company, or by their successor Don Antonio Galarza or by San Luis under Lloyd Rawlings' direction.) And this diverted the water into a canal which went maybe three-quarters of a mile along the side of the river, gained a little head and then ran into a low head electric power plant. I don't remember what the power capacity of that plant was, but it was not very great; maybe 100 kilowatts or something like that. The dam wasn't high enough to dam the river up all year round. It was low enough that during the rainy season the excess could flow over the dam and only the amount needed for the power plant was diverted. Then during the dry season the entire stream was diverted.

That little plant was constructed in 1910. The first mill that used that power was a little stamp mill. It had nine stamps, and was located on the site where the American colony was later built, across the river from the present-day mill. (The first mill that San Luis operated was at the Tapacoya mill site of the unsuccessful La Abra Silver Mining Company. They abandoned a virtually new and unused mill built in the late 1860s. Don Antonio Galarza later acquired it, operated it for a number of years, then sold it to Lloyd Rawlings for San Luis. Rawlings operated it from 1885 to 1908. It was five stamps followed by pan amalgamation.)

Then just before the 1920s they needed more power as a result of the discovery of more ore in the mine and a desire to expand the operation. Then two large penstocks were put in from a stream on the edge of the plateau down to a power plant down at the Piaxtla River level. I don't remember what the head was, but it must have been one thousand feet and perhaps more. There were two generators and water wheels put in. The maximum generator capacity was about 400 kw, but much of the year there wasn't enough water to operate it at full power. This plant went into operation in 1919. It was called the Corral de Piedra power plant and was located in the mouth of a very steep arroyo called the Ancon Arroyo. The power plant was sometimes called the Ancon plant also.

The power plant was connected to the Tayoltita site and to the mine site by copper wire electric lines. The mine surface plant was a good 15,000 feet from the Tayoltita mine site in a straight line up the Socavon Arroyo. The main power line was just on wooden poles and I don't remember exactly what the voltage was. I think it was somewhere around 12,500 volts; it wasn't very high. From the mill we got power to run the electric lights and things in the

staff houses. This still wasn't enough power, and as time went on they needed more.

So a dam was built way up in the Sierras, up on the plateau, called the Santa Rita dam. This impounded snow runoff, water, and stream water. The storage dam helped increase the amount of water available to generate power in the dry months of the year so that the Ancon plant operated at a higher average level of capacity than before.

I should go back and say that the Corral de Piedra plant probably averaged maybe about 200 kilowatts output, due to the water variations. As I said, in 1933 they purchased a hydroelectric power plant in the next river system to the south, called the Presidio River. There was a power plant that had been used by an English mining company over there, and they had closed down. San Luis had examined their property, thinking of purchasing it, but just wound up purchasing the power plant. That was about 300 kilowatts capacity and was located on a tributary to the Presidio River called the Palmarito Arroyo. We had to build a transmission line over the dividing, intervening mountain ridge to the Tayoltita mill. It was a day and half muleback ride over there, so it was a long transmission line. This power was synchronized with the power from Corral de Piedra at the Tayoltita mill power house. The Palmarito plant seldom operated at full capacity due to the seasonal variations in the stream flow of water.

They still needed more power. In 1947 or '48 they put in at the mill a small diesel generating plant to supplement the hydroelectric plants. The diesel engines were the three four-cylinder stationary diesel engines that were initially installed in Guanacevi and for which I surveyed in the concrete foundations back in 1934. Then when Guanacevi was shut down they had been sold to Homestake Mining Company who dismantled them and took them to the manganese plant that they erected in Mulege in Baja California. It started out as a wartime project and in 1947 was shut down. San Luis bought the engines back and moved them to Tayoltita. So they were there to supplement the hydroelectric plants during the dry season. During the dry season there wasn't enough stream water to run the hydroelectric plants at full power. The diesel plant consisted of three 300 kw diesel driven generators. Two normally operated in the dry season and the third was used as a spare.

Then in 1948 they leased a 600 kilowatt hydroelectric power plant from the Mexican Candelaria Company, which had been the company that operated the Candelaria mine in San Dimas that my dad had first worked at in 1915. It also provided power to another mining area that they worked called Contra Estaca, which was about

a two or three-hour muleback ride down the San Dimas arroyo from San Dimas, and close to three-and-a-half to four hours from Tayoltita. This power plant was called Las Truchas.

It was built the same way as the Santa Rita-Corral de Piedra installation was. A retaining dam was built on the plateau, damming off a stream that drained down into the next canyon north of us. This was the Bacis River canyon. It had a rich silver mining camp in it at one time, but this power plant was not associated with it.

There were two penstocks down the cliffs into the canyon. The head on this one was tremendous. It was 2,500 feet. The water fell down through the pipelines and had 2,500 feet of head on the water wheels, so it was a very high pressure. It meant that very special care had to be taken with the water wheels in their manufacturing and maintenance because they could easily get pitted and worn from this high pressure water.

Chall: The wheels were wood?

Swent: No, they were brass, Pelton water wheels. At any rate, the climb from the Las Truchas power plant up to where the fellows lived on the plateau was very, very steep. It was straight up and down. So they went to a 24-hour shift. Rather than climb down and up after eight hours they would work 24-hour shifts at the generators.

The first Mexican national to be trained by the company to do a technical job previously done by an American was Oscar Perez Escobosa. His mother, Dona Nicolasa, was living in San Dimas in 1915 and was from one of the best San Dimas families. She and my mother became very good friends, and she eventually moved to Tayoltita when the San Dimas fortunes declined and Tayoltita's rose. When Lee and I moved to Tayoltita, my mother asked Dona Nicolasa to help Lee get adjusted, and they too became good friends. As children, Oscar and I were playmates and the friendship has lasted. Oscar had a good schooling but no technical background but went to work in the San Luis electrical department under the eye of Ted Wilcox, the American master electrician in Tayoltita. Oscar learned the electrical trade very quickly and gradually became Ted Wilcox's right-hand man. When Ted retired after many years of service, Oscar took his place and was assigned a staff house outside the compound. Oscar was not only smart, but was witty and ambitious. At the annual New Year's party he kept everyone laughing with skits that he would write the lines for, and songs with his own lyrics which he sang to the accompaniment of his guitar.

When San Luis acquired the Palmarito hydroelectric plant, he devised a synchronizing device using a light bulb rather than a meter which the company didn't have, to enable him to put both the Corral de Piedra and the Palmarito power systems into a single system. The plants generated alternating current at 60 cycles per minute. If two power systems are put together without being sure that the cycles of both are synchronized with each other, the systems will not combine. Normally the synchronization is done with expensive meters showing the exact cycles and phases of each system. Oscar did it using light bulbs and watching their flickering. When neither flickered, he could switch the two power systems together. He later used the same device to bring in the diesel engines, and the Las Truchas plant.

When radio stations began to spring up in Mexico, Oscar bought one in Mazatlan. He expanded this into a network of stations up and down the Mexican Pacific Coast. By then television stations began to be built in Mexico and Oscar owned the first one in Mazatlan and then again spread out north and south from Mazatlan. Eventually he built a television repeater tower up on the Las Palmas ridge so that people in the district could receive his Mazatlan TV station! His very pretty daughter became a Mexican national television star in Mexico City.

Oscar's was probably the best success story for technical training of local born persons, but there were other success stories in other fields.

So then we had to build a transmission line over from San Dimas over to Tayoltita. That was done, and then we had three sources of hydroelectric power plus the diesel plant, and that was it for the time that I was there. Even at that they kept expanding the mill and putting in bigger compressors at the mine. So we were always right up to the limit on power.

San Luis eventually sold the little Tapocoya hydroelectric plant to the Perez family and they sold power to the residents of Tayoltita that didn't get power from the company. Oscar Perez, of course, was the principal person in the little business. Later the Perez family dug a well for the town on the bank of the Piaxtla river and sold water to the town. Both of these services made money for the family and relieved the company of these obligations.

We were limited to a single 15-amp fuse for each household in the staff houses that the company provided. That really isn't very much power. We learned how to balance things around and turn this off when we turned that on and that sort of thing, to keep from blowing fuses. One of the things that we never really did have quite mastered was anticipating when the refrigerator would kick

in. Every once in a while we would underestimate and the refrigerator would kick in and blow out a fuse. So I got very handy at changing fuses.

Chall: Now this had to be done while you were growing up, too, because there was even less electricity.

Swent: There was less total electricity, but there was also less consumption. Households then had, principally, lighting and no other electrical appliances. Later they got refrigerators, hot plates, and other modern electrical appliances. The company also made some major changes in the mill and in the mine, including installing a big, new 400-horsepower compressor. They had never had anything over 100-horsepower compressors before. In fact, the company couldn't get it started until well after I arrived there in '47. The first time the company managed to have enough power to start it was in '48 when we got the Las Truchas power.

Then in the mill a number of changes were made. The basic flow sheet was a sodium cyanide leaching process, using what is called a counter-current decantation flow sheet. Basically the decantation means that you don't do any filtration, you just grind the ore and make a pulp from it, add the leaching solution at full strength of cyanide in the grinding, and that dissolves a lot of the values very quickly. Then the slurry goes on down through a series of tanks called agitators where it's just kept in suspension. Air is bubbled through to provide the oxygen required to make the reaction take place.

Then after some 110 hours of agitation the slurry went to thickeners, several stages of thickening where the solids were allowed to settle and by now the solids were pretty well devoid of their gold and silver values. The solutions were pumped counter-current--that's where the term counter-current decantation comes from--the solutions were pumped in the other direction. The tailings proceeded from one thickener to another in series and the solutions progressed upwards against that current so that the solution was very weak in gold and silver values at the end, and as it moved up through the circuit it became stronger and stronger in gold and silver values.

Before I went to work in 1947 they changed over from an old Butters filter system and put in these thickeners. I think they were more economical from the point of view of manpower, but they required a little more power. Then they added clarifying filters for what was called the pregnant solution, the solution that's ready for precipitation of the gold and silver. The precipitation worked best when the solution was very clear. So they put in a

system for doing this clarification. Again, that was another power consumer.

In the mine, in addition to putting in the big compressor, they went in for a few electrical installations, although not many. Not as common as it is today in mining. Most of the motivation was still by compressed air. The power consumer for the compressed air was really the compressors, although if you didn't have the demand for compressed air the compressors would loaf and not use their full required power. They put in battery-powered locomotives before I got there in 1947. For the 15 level, which I mentioned before was the big new haulage level, they acquired a big 15-ton trolley locomotive and put in a trolley wire up in the roof of the level. This was another power consumer they had. It was direct current, and they had to have an AC-DC convertor for that.

In 1938 a program of modernizing the mill began and lasted until 1940. A new ore bin was built, and new ball mills replaced the old ones, and new conventional thicknesses and new tray thicknesses replaced the Butters filters.

So those were the main additions.

Chall: Well, it's quite a bit.

Swent: They enlarged the crushing plant in 1938.

I think that covers the water, power, and timber.

Chall: That shows that changes were certainly being made.

Highgrading as Usual

Swent: One of the items here [on the outline] is the highgrading.

Chall: Yes, I wondered whether you had solved that problem a number of years before that your father had, whether there was still anything serious going on.

Swent: That problem has never been solved, not only in Tayoltita but in other high-grade mines of the world. It exists and it will probably exist as long as human beings are doing the operation. But it was a constant challenge in Tayoltita. You would uncover groups and methods and get them stopped. But then you couldn't assume that it wouldn't happen again; you just had to figure out what they had devised to replace the old scheme.

One of the problems was the presence of what we called ore buyers in town who would buy the stolen ore from men and then ship it out. Anybody could have a mining claim up in the hills there and say the stolen ore came from their mining claim. They would ship it to a smelter and then declare it as having come from their claim. They needed capital for this because they had to accumulate enough ore to make a shipment worthwhile. They usually took it by muleback down to the coast to Dimas station and shipped it by railroad around to a smelter in Torreon. But all of this required considerable capital.

We seldom tried any legal prosecutions, but we did try one on a Chinaman who operated a store downtown and had a little ore-buying operation in the back. He sometimes even smelted his own high-grade material and produced a little bullion. But we tried legal steps against him and he was ordered arrested and was to be taken overland to Durango, the capital of the state, for so-called trial.

In Mexico--I'm not sure whether this still persists--but in those days they had what they called the "ley de fuga." This was an actual law. It means the "law of flight." It was a law that had been passed in Porfirio Diaz's time which authorized police and military to shoot any prisoners who attempted to escape while being transported. Well, the reality of it was--because transportation in Mexico was difficult in those days and if a prisoner was being taken from one town to another, from one jurisdiction to another, it usually meant a long trip on foot for both the guards and the prisoner--the reality was that they would get two or three miles out of town and shoot and kill the prisoner and come back and say that he had attempted to escape. Everybody knew this.

So when this Chinaman was ordered to be taken to Durango, which was a several-day trip overland, he knew that he would get shot probably. His name was Juan Ley. And he tried to get the company pilot, Gordon Barry, to fly him over to Durango in one of his planes. By then Gordon Barry had bought his own planes, and they weren't owned by the company anymore. So we advised Gordon to charge him a really healthy fee--because this man was in desperate straits--and try to sop up some of his capital. I forget what he charged him, but Gordon tells me he charged a really very fat charter flight fee.

Anyway, he was of course dismissed and didn't ever get convicted or anything, and came back and still had enough capital that he stayed on in the business. Then in the middle of the 1940s--I'm not quite sure of the date--somewhere around 1945 or '46, they tried legal steps against him again. He had accumulated a carload of high-grade down at Dimas Station and was just about to

ship it when we filed our papers. So the authorities in Mazatlan, which was the judicial center, impounded the car, brought it up from Dimas to Mazatlan, and unloaded it into a warehouse which they sealed and gave him a warehouse receipt for it. So he had a negotiable warehouse receipt, and he borrowed money against that and went to Mexico City and started wining and dining the people that he needed to help him.

And eventually he got freed, so he came back to claim his high-grade from the warehouse and produced his receipt. And they broke the seal and opened it up and all that was inside was a pile of sand! So he had been doublecrossed somewhere along the line. We hadn't gotten our justice, but justice prevailed, because he was broke. He had borrowed against the warehoused ore and when it disappeared he was broke. So that put him out of the high-grade buying business. But it still went on, with others doing the buying, right down to the very last that I was there. And we'll come back to Juan Ley in other respects later.

Building Roads: Transporting Heavy Equipment

Swent: One of the things that you don't have listed here [questions] is transport. This was probably one of the most important concerns, particularly in and out of Tayoltita to the rest of the world.

Chall: You had your airport by now.

Swent: Yes, I've outlined that. But that was only good for small things, mail, people. You couldn't bring in the large tonnage--at least, we didn't want to buy the airplanes for it; you could've, I guess--bring in the large tonnage of heavy supplies needed to run the mill. We had about two thousand tons of supplies that we needed to bring in every year: explosives, grinding balls for the ball mills, liners. The linings in these ball mills wear out and have to be replaced. They're thick cast steel plates, very heavy. The same thing for crushers. And then spare parts, all sorts of things. A certain amount of food: beans, corn. We weren't self-sufficient in beans and corn in the area.

In 1938 bulldozers became a practicality. They experimented with having a bulldozer try to make a road up the river when the river was low from a town called San Ignacio, which the trucks could get to on the river. That was down at the coastal plain. And the bulldozers were able to gouge out a road very fast because they were just coming up the gravel bottom of the river. They were able to gouge out and level a track that they could then pull

tracked trailers on. This road crossed the river multiple times. The track just came right up the river and every time the river made a bend it crossed it. The tractor train could make about three round trips a month. They had, I think, three to five trailers, and they brought in about sixty tons on a trip.

There was just one tractor, and one driver in charge. His name was Red Sheets. He was a tough old boy. I made one trip with him and enjoyed it very much. It was a real eye-opener. I did that after a summer vacation down there, I believe.

At any rate, that worked for about three years, worked very well. You could always hear the bulldozers and trailers clanging away, miles before they got to town.

In 1941 they tried multiple drive, I guess you call it four-wheel drive with many, many gears, trucks. They were built by White. They did the job; they could do it. So they replaced the tractors in about 1941. In the meantime, in previous years the tractors could only operate during the dry season. In the wet season they were holed up with not much to do. So when the rains came we tried to have them at the Tayoltita end. If they were at the other end there was just nothing for them to do. But there was quite a bit of work that they could do around the mine and mill site.

One of the things we put them to work on, just in the spare time, was building a road up the mountainside to the mine. It took two or three seasons to do this, but they eventually got a road built up to the mine haulage level, at the 10 level of Arana, which is where the crushing plant was. Then in another year or two they had extended the road all the way up to the mine camp where the mine office was at the number one Arana level. That would be roughly one thousand feet higher. So then we were able to buy four-wheel drive pickup trucks and move light cargo up and down. Then they got heavier trucks, stake-body trucks with four-wheel drive, to take the heavier cargo. That made a big difference. Up until then we had had to ride the mules up and down. Even though you could get in and out by tractor and airplane and truck, you couldn't get up to the mine site, the mine office, without riding a mule.

Chall: So did you begin to drive or ride a truck when you got there in 1947?

Swent: Yes. For riding to work up at the mine, yes. For my job at Santa Rita, which I said was an outlying mine, no. There I had to ride muleback. It was about an hour's trip, but it was off in a

different direction, up the Piaxtla river from the mill, and the truck road didn't help any there.

Chall: So even at the time that you left, in '54, were people still riding muleback?

Swent: To Santa Rita I think they're still riding mules today!

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Swent: Initially the company started off contracting the freighting. When the trucks came in they contracted the freighting to a freighter down on the coast that had some capital and could buy his own trucks. He was contracted to build the road and bring in the freight and we paid him so much a ton.

Of course, the road washed out every rainy season. Those rains were tremendous there in the rainy season, and the river would rise very high, four or five feet. There would be real rushing torrents that brought in lots of boulders and tore out all the crossings. So the road had to be rebuilt every year. We always had a guessing game in the springtime. There are two rainy seasons there: one in late June into September. Then there would be an interim with no rain, but it generally wasn't long enough. And then you would get into winter rains in December and January, into February. And it wasn't worth the money to rebuild the road for the interval between September and December.

Chall: You didn't have very much time.

Swent: No, it usually took a month to six weeks to rebuild the road. So it wasn't worth the money to rebuild it then, although if there was an emergency and there were emergency supplies that needed to be brought in--they did it once, I think. So we had a guessing game at both ends of the season. In February the question would be, when do you start building the road? When is the danger of a rain that would wash it out and destroy it gone? That was always a guessing game, and sometimes they guessed wrong and would get started and then have a rainstorm and have it washed out.

The other guessing game was at the very end of the season, when you knew it was going to rain in late June and you had menacing problems every day, but you wondered if a truck could make one more round trip. It would take usually twenty-four hours for the trucks to make a round trip. You never knew, because when it came it would just come overnight, the deluge.

Chall: What would happen if you had a truckload down at the other end when the rains came?

Swent: Well, if it was at the other end it would just have to stay there for the duration.

Chall: You might not get the supplies that you needed?

Swent: Well, usually we had all of them in by then. It was a question of topping things off. One of the critical items was diesel fuel for the diesel engines. The dry season, which was what we had just been going through prior to the beginning of the rain, would usually be the period when you used the diesel fuel. So we kept bringing diesel fuel in as we consumed it. Then the question would be did we have enough in our tanks to see us through until the road came through next spring? So we kept topping the tanks off, and every day that we could we'd bring in another load of diesel fuel to be sure that we had enough.

Chall: It took planning.

Swent: Yes, it meant you had to have real knowledge of local conditions.

An Amusing Tale of Competition in Freight Hauling

Swent: The contractor was a man named Francisco Ferreira. His nickname, of course, was Pancho, Pancho Ferreira. And he lived down on a ranch not far from San Ignacio, right off what later was the main coastal highway. Initially he not only did the freighting for the San Luis Mining Company, but also contracted with merchants in town who had little stores to bring their supplies in. This was a lucrative business for him, and it went along for several years without much problem.

Then our old friend Juan Ley, the highgrader who had been decapitalized, was running a grocery store in town. He decided that he could bring a truckload up of his own groceries and save having to pay Ferreira's exorbitant rates, or what he thought were exorbitant rates. So he made arrangements to buy a truck and start hauling his own supplies in. And, of course, Ferreira objected to this and he claimed that he had the rights to the road because he built it each year. He tried to stop him legally but he couldn't do it. You can't do that sort of thing in Mexico anyway.

So then quite a feud developed between these people. The first thing that Pancho tried to do to stop him was to have people watching Juan Ley's truck in San Ignacio. When they heard that it had left, Pancho sent his son Mario after it to try to shoot his tires out. But the Chinaman had gotten enough of a lead that Mario

never really caught up with him. At least that's what Mario told me. He said he couldn't catch him. So that didn't work.

So then the next thing: Mario showed me a set of big steel plates, quarter-inch steel plates. They were about eight inches long and maybe three or four inches wide. They had originally been maybe fifteen inches wide and the extra twelve inches had been turned up to make a U and cut into prongs. They had just taken a cutting torch and cut the metal off into great big prongs. It was a big U--with six-inch spikes sticking up, very sharp. And they took these and buried a bunch of them in the river crossings, in the gravel. They thought that these would puncture the tires. And they noted where they were so that their own trucks could avoid them. Then they figured that the next time the Chinaman made a trip up there, why, he would blow his tires.

Well, old Juan Ley wasn't so dumb. He got wind of this. And he had a pretty fair idea which crossings they'd put these in. He had several sons. The older one was called Juanillo. He would have Juanillo and several of the others and some employees walk across the ford in front of the truck, barefooted. And they would locate all of these buried spikes and dig them out. And then the truck would cross.

Chall: My goodness, it sounds like a Tom and Jerry cartoon.

Swent: Well yes, it was very serious though. So this didn't work. Pancho's trucks were higher and could go through deeper water than the Chinaman's truck could. On one of the fords just above San Ignacio he bulldozed up a retaining dam and made the crossing much deeper than usual and hoped that the Chinaman's engine would drown out as he tried to cross. So the Chinaman took off one morning on a trip up the river. Pancho by this time had his own Piper cub that he flew around in. He couldn't wait to find out how the Chinaman had fared with this deep ford. So he got in his Piper cub and flew upriver to see. He got to the ford and circled around and the Chinaman's whole crew was out swimming! They were having a big swimming party in this big pool, because most of the time the river wasn't deep enough to swim in.

Chall: His crew?

Swent: No, the Chinaman's crew. They were all having a good time swimming! And the truck was parked on the far side. He had gotten it through. He didn't know how he had gotten through.

Then I saw Juan, passed him in the street after he had gotten through. I stopped him and said, "How did you get through that deep crossing down there near San Ignacio?" "Oh," he said, "gottum

submarine, gottum submarine." But actually he had done what the amphibious forces did in World War II. He had greased all his vital parts of the engine with waterproof grease and put on an extension of air intake and exhaust and gotten on through.

So this was pretty much the end of the feud. Pancho kind of tossed in the towel then and gave up the contracting. So then the company bought its own truck. We bought a great big 25-ton Euclid truck with a special trailer. It was a big event when it arrived in Tayoltita. Everybody called it the "Eu-clee." I remember our master mechanic, a fellow named Donato Garcia. He was also the head of the union at the mill. He looked at it and it looked beautiful and he said, "Give it a month and they'll have it into me for repair." And he was absolutely right. It was in his shop and in fact we had a warranty failure on it. I had to photograph the yoke that stretched and broke and send it back to the Euclid people. They made good on it but it held us up for quite a while.

Chall: Those trucks worked very hard going up those hills.

Swent: Oh yes, but they hadn't anticipated the strains.

Chall: You were the assistant manager all the time that this feud was going on?

Swent: Yes. [chuckles] I knew these men personally, and Mario was about my age. We got along very well.

Chall: Did it worry you any about what might actually happen, whether there would be violence that would be truly upsetting to the townspeople?

Swent: We didn't really think it would come to that. Frankly I thought Ferreira was bluffing. It was just one of those things. You can't keep the roads private and the law was against him and everything else.

Chall: So did you put him out of business in general when you bought the Euclid truck.

Swent: No, he gave up the business. He was getting along in years and didn't want to contend with the competition, so he sort of retired. That's why we bought the Euclid. We were perfectly satisfied with his doing the freighting for us before that.

I think that pretty much winds up the transport end of it.

Chall: Yes. That's a good story.

Houses and Gardens

Swent: The housing--there were two types of housing, one for the hourly paid workers, mine and mill workers, and then housing for salaried and staff people.

Chall: Did that change at all while you were there from what it had been?

Swent: Well, in the old days, before they had a union--and I'm not sure when the union came in. I think during the Cardenas presidency and somewhere in the mid-thirties--up until then there was no hourly employee housing anywhere. Then after unionization this was one of the agreed-to benefits that they would get. The first such houses were built up at the 10 Arana level, in the little town called Socavon, in 1936. Then some houses were built near the airfield at Tayoltita for the mill workers. But in neither case was it enough for all the employees. A lot of them had places to live downtown and didn't really want or need the housing.

One thing that has always been amazing to me--and nobody can tell me that Mexicans are lazy, I just can't believe it. I think it's just a question of motivation. They'll work hard, very hard, if motivated. The Arana 10 level is approximately 2,200-2,400 feet higher than Tayoltita. And yet many men walked to work at the mine from Tayoltita. They climbed that 2,200 feet or more before a shift, and then walked back down it after shift day in and day out. Even after there was housing available at the mine portal level. I only walked it two or three times myself. It's a tremendous walk. It was a day's work right there. And then they would do a day's work.

I have seen them work very hard. We used what we called a contract system or incentive system of paying them on the basis of units of work that they accomplished. Once they understood it they worked very hard. They would take this long climb in the morning and work a hard day's work and make good wages and then go home down that same two thousand feet.

The housing, I suppose, did cut down the number who did that walk. And the labor contracts were usually three years duration, sometimes two years. Usually a lot of the negotiations would wind up in Mexico City. They would try starting out at the local level, but when it got right down to the crunches they would be adjourned to Mexico City where the national officers would intervene. But almost each contract there was a requirement for more housing and more housing.

After the houses required were built at Socavon, we started another local town called Las Palmas by building mine hourly pay employee housing up on a fairly flat ridge that formed the top of a mountain. The location was about five thousand feet high, and was about a half hour walk from the One level of the Arana mine, and about three quarters of an hour to the Ten level. It was built principally for employees who worked on the surface at the One level or those who entered the mine through the One level. The mine shops, compressors, a small timber yard, and mine offices were located there, and the place was called Cinco Senores. Another vein and mine (the San Luis vein and mine) were located above the Arana One level, and employees could walk to the San Luis mine Ten level adit to go to work in the San Luis mine. The One level of the San Luis mine was virtually at six thousand feet elevation and practically at the top of Bolanos mountain, but it was very old and had caved in many years before.

The Las Palmas houses required a water supply, as there was no water available at the mountain top, so we laid a small pipeline up the mountainside from the Tayoltita mill, and provided it with a high pressure pump, and pumped water to a distribution tank at Las Palmas. I think I already mentioned that this water was always warm or hot as the pipe was laid on the surface and was in the direct sun most of every day.

The other type of housing was the housing for staff and salaried employees. We had this in two places. One was at Tayoltita, across the river from the mill, for the people who lived in Tayoltita. Then there was originally a great big house up at the mine office site which was called Cinco Senores. This had rooms and apartments in it. It was reserved basically for engineers and geologists and that sort of employee. It wasn't used for foremen or shift bosses. The engineers and geologists were usually American. In later days we had Mexican engineers.

The shift bosses were all local Mexicans, and we provided a different level of housing for them. These were built along the hillside in either Cinco Senores or in Socavon. They were generally adobe buildings with several rooms and good roofing--generally tile roofing. The housing for the hourly paid people was generally simply two, maybe three rooms at the most, and usually en masse. You would have maybe a long line building, maybe 150 feet long, just divided up into rooms one after the other, sort of like barracks style.

Chall: But families lived in them?

Swent: Yes. They would have two or three rooms apiece, and they were interconnected. They would usually have some sort of a bathroom

facility and a kitchen and a general room that would serve as living room and bedroom. For laundry we generally put in central washing facilities. Not with washing machines--it was just concrete tubs and troughs where they could do their washing. The company furnished the water.

Chall: So if you built housing in those areas, did you have to build schools in those areas, too?

Swent: Yes; we built schools. We paid for schoolteachers but we didn't hire them. They were hired by the school authorities. But we had to pay for their salaries and we furnished housing for them, too.

Chall: Was the housing free, or did they have to pay a certain amount of rent for them?

Swent: No, it was free for the employees and schoolteachers. And there was quite a demand for it. There was always a waiting list, and the company had a person in charge of administering the housing, seeing that employees took care of the housing, administering the waiting list, and taking care of repairs and maintenance.

The housing for staff was better. It had several rooms. Let's see. The early houses there had a kitchen, usually a screened-in porch that could serve as a dining area, and a fairly large living room, a bathroom, and two bedrooms. The company furnished the beds and a refrigerator and the power, up to 15 amps, [chuckles] and water. When we first went there we cooked with wooden stoves, that is stoves that burned wood, because there wasn't enough electricity to do electric cooking. Eventually Lee and I bought a hot plate, but you had to be very judicious in its use. But it was a two-plate burner. I forget, it was about 1,000 watts per burner, so it used a lot of power. We had to disconnect everything else! [laughter] But Lee got very good at cooking on that, and using the wood-fired stove.

Chall: It would take a bit of learning.

Swent: These houses were built with concrete slab floors and had adobe walls plastered with white plaster, and a concrete roof over which red roof tiles had been placed. They were very livable. They generally required very little maintenance. The principal problems were plumbing problems. And these types of houses were furnished with two steel beds, mattresses, simple wooden dressers, wooden dining room table and chairs. Employees provided their own living room furniture and kitchen utensils and dishware.

The staff area at Tayoltita was fairly large, and it had been fenced in with cyclone fencing. Back in--I can't remember when,

probably in the early 1930s--there was an older fence there, and it was replaced with cyclone fencing somewhere in the thirties. At the gate, the entry, the only gate there was, we had the central station for the telephone system. The company had its own telephone system. Lines ran up to the mine, over to the mill, to the office which was in this compound, to all the staff houses in the compound, and then up to the Corral de Piedra power plant and to the Palmarito plant and to the Las Truchas power plant. But those communications to the power plants were very difficult because of the long distances. It was just a direct wire transmission; there wasn't the modern-day microwave stuff. So talking to Las Truchas, which was the furthest away, was a real chore. It was very difficult.

To get back to the housing. I was telling about the telephone station there. The operator of the telephone was also a guard. The telephone traffic wasn't all that heavy, so he could serve as a guard and plug in people to the calls. It was all a hand-operated system.

Within the compound there were, let's see--there was the office building, then there was the house that my parents had lived in and I had lived in as a child. That was the only two-story structure. The lower story was a dining room and then it was turned into a recreation center where they had a big dance floor and a billiard table. The upstairs was where my folks had lived. That's the second building.

Chall: Who lived there after your parents moved away?

Swent: For a long time, nobody. They kept it as a place where my folks could return to when they wanted to. I lived there when I was visiting at times, but during the time that I worked there, from '47-'54, nobody had lived in it except when my folks came back to visit. And they had a lot of their things there.

Then there was a staff house. Well, right across from the dining room was a big kitchen. We had a Chinese cook in it and a big ice-making machine that made big blocks of ice. And the space between the two buildings was covered by a giant bougainvillea that grew over a trellis that was connected the two buildings. So they had a waitress who would bring the food over from the kitchen to the dining room. Even in the rain she didn't get wet, this bougainvillea was so dense. It had to be a tremendous storm before it was difficult to go back and forth without an umbrella or something.

Then the next building over was a staff house that was just a rooming house. It just had single rooms for single people or for

visitors who might come in and visit, say like traveling salesmen or service people, etc.

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And there were about, oh, I've forgotten, six or eight single rooms in the staff house. In later years the dining room in the two-story house and the separate kitchen were done away with. They were left there, but the dining room was just added to the recreational area and the kitchen became a storage area. A new kitchen and dining room were built and added to the staff house. So the men living in the staff house (and they were the primary customers) could just go right into the dining room without having to walk over to the old dining room. In the wet weather that saved them a little bit of a bother.

Chall: Where did you and Lee live?

Swent: Well, we lived in one of the houses. In addition to the staff house, then there were--let's see [counts to himself]--five other houses within the compound. They were fairly well scattered. They weren't right next to each other; they were at least 100 feet apart and sometimes more than that.

I left out one important house, that was Larry Morel's house. That was an additional house. So there were six families in the compound. And in addition there was a fairly large building where two Mexican women lived. They did the laundry for people there. In the building that they occupied they had showers and a room for the servants of all the American families. They could all go there to bathe, clean up, change clothes, or rest at a central place.

Chall: But they lived there all the time? That was their home?

Swent: Most of those girls lived in town and walked in, maybe a mile or so to go to work. They didn't live in the colony.

Chall: But the women who did the laundry?

Swent: Oh, the two women who did the laundry, yes, they lived there. They did a lot of individual things for the manager. Their building was the one right following the manager's house. And the manager's house was much bigger than the ones I've described to you. The Morels had added to it and enlarged it. That was one of the reasons they didn't see fit to move into the one my folks had lived in, because they were perfectly comfortable. They had a perfectly adequate house, very large, several bedrooms, good entertaining facilities and a good kitchen. Basically the upstairs wasn't any

bigger, didn't have any more bedrooms, so there really wasn't any great difference.

Chall: But managers in, I guess, all the mines where Homestake had mines, had bigger houses than the rest of the staff?

Swent: Oh yes, this is customary in the mining industry.

Chall: Because they entertained?

Swent: Yes.

Chall: It's a status symbol also.

Swent: It's a status symbol, in a way, as well as a social symbol.

Part of the compound, when I went there in '47, was a large vegetable garden that was being run by two nephews of Juan Ley's. One of them was Pancho Ley, and the other one was Ramon Ley. They were much younger than Juan. They ran this vegetable garden under contract from the company. Then we would buy vegetables from them. You could go to the gate there at 5:00 in the evening and ask for four carrots and you got four carrots, and you took them in and cooked them. The vegetables were--I may not have a very complete list of them, but they had cabbage, tomatoes, onions, carrots, and some Mexican vegetables. I think one of them is called quelite. And green and red peppers, chile peppers, radishes, and some lettuce. And of course this was all seasonal. And strawberries.

Then around the colony--the colony was very lushly vegetated. We had lots of fruit trees. They had big mango trees, some very fine old orange trees, lemon trees, grapefruit trees, coconut palms, guava trees, guamuchil trees. The guamuchiles bore a fruit --I'm not sure if it's called a fruit. I always think of fruits as being sweet. This wasn't really quite sweet, but it was a pod that had seeds in it. But surrounding the seeds was a thick white material that was chewable. You broke the pod open and chewed the white material out of the pod and spit out the seeds. Kids just loved them. They would eat them till they got sick. And they ate the green mangos until they got sick. They were fairly tasty, too. In fact, the doctor got very knowledgeable on how to treat the kids with upset stomachs from the green mangos and the guamuchiles.

Most people just ate the fruit from the tree that was around their house. The avocados just gave so much that we had to sell them to the store downtown. You couldn't eat them all. Oranges, too. We had excess oranges there and excess mangos. The mangos were just prolific.

Then there were flowers around, flower bushes and plants. We had hibiscus and poinsettias, nasturtiums, roses, and lots of others, ferns and bushes. I can't even name all the flowers. It was very, very colorful and very green. A lot of these trees and bushes were either around the manager's house or around my folks' house and needed taking care of and were in areas that really weren't assigned to any house. So they had a gardener who took care of all that, and mowed the grass. There was grass between a lot of these trees. It was just very pretty. The residents in each house were responsible for their garden area.

Recreation

Swent: Then there was a tennis court and a swimming pool. These had been built in the early 1930s. Of course, both the tennis court and the swimming pool were only seasonal. The swimming pool was unheated, but we did have a filter, a sand filtration system for it. We added copper sulfate to the water to keep the algae from accumulating. It was just a concrete pool. In the wintertime it was a little bit too cold to swim. We always made a tradition of swimming on New Year's Day, kind of like the Polar Bear Club in a way. But on December thirty-first everybody swam and on January second nobody swam! [laughter]

The tennis court was a dry-season thing. It was a clay court, and during the rainy season it just was unplayable. It got too wet, and you couldn't play on it. But during the dry season, why, they would roll it and line it and put up the nets and you could play for several months.

Chall: Who was allowed to play on the tennis courts?

Swent: Well, all the people residing within the compound and anyone that they would invite. There weren't any hard and fast rules on this. Actually, the people who lived outside the compound--there were very few of them who knew how to play tennis. And not even all those living within it played tennis. We had some good tennis players from time to time.

Chall: Did you play tennis?

Swent: Oh yes, that's where I learned.

Then one of the houses, the oldest one of all of these five houses that I mentioned, was turned into a set of apartments, three apartments for people coming down from Cinco Senores. Families

that were living up at the mine would come down for the weekends, particularly after trucks became available to move people. Previously they had ridden down on muleback. A lot of times they didn't want to do this, ride down on muleback and ride back up. It was a two-hour trip each way, and sometimes they'd just as soon stay up at the mine, although it was a much lonelier life up there.

In town the company sponsored and eventually turned over to private people to run, first of all, a little movie theater. It was open-air. In order to be able to charge, to allow them to charge entry, they built some walls around it. The walls were about fifteen feet high, so the people couldn't peek in and see the movie free. Then later on they added a two-lane bowling alley to the side of this. During the daytime you could go in and bowl, but when the movie was on in the evening, the bowling was closed, because the entry was through this theater. The floor of it--you could take the benches off and it served as a basketball court.

Chall: This was provided by the company?

Swent: Initially it was provided by the company, and then, as I say, it was turned over to some people, the better families in town, to run as their own enterprise. I say "the better"--I should say the more financially able. The movie was always a problem. It was run by a very obsequious fellow named Jose Cruz Moreno. He was also for years the dispatcher of the airplanes and was the one who had charge of documenting the shipment of all the bullion. In later years when airplane dispatching became more prominent in the country he claimed to have dispatched more dollars worth of cargo than any other dispatcher in the country, because he had dispatched all these bars of bullion. [chuckles]

Chall: Inflated their prices as they went along!

Swent: So anyway, he ran the movie, but he always realized that he owed the business to the American company. He would announce the show for, say, nine o'clock at night, which is about when it would get dark sometimes. But he wouldn't start at nine if he didn't think the people from the American colony were there yet. He would wait until they arrived. So then this got into a vicious circle. The people from the colony would say, well, there's no point in going at nine, because Jose doesn't start the movie at nine. So we'll go later. It just kept getting later and later. And he never did really catch on that he should just start the movie on time regardless of who was there.

Chall: How often would you have a movie?

Swent: As time went on they got more and more frequent. Originally it was once a week, on Saturday or Sunday. Then as transportation got better and you could get the films in faster, why, they got to having two and three a week.

Chall: I see. So once a week it was an occasion. I guess everybody came.

Swent: Yes, right.

Chall: And what kind of movies did he show?

Swent: Well, mostly American ones. A lot of them would have Spanish titles in them. In later years Mexico developed their own movie industry and they would show some of those. But basically the Mexican audiences preferred the American movies in the early days. The acting was better, more vigorous. You know, I'm talking about the old westerns, Douglas Fairbanks, Errol Flynn action movies. The Mexican movie audience there wasn't very much for the type of movie where there isn't much real action. The sophisticated, thoughtful ones they didn't get much entertainment out of.

Medical Care

Swent: Then medical care--

Chall: Yes, I remember how your mother had to go down to the hospital there, and sometimes stayed quite a while. There was a German doctor?

Swent: Yes. Originally, back when I was a kid, they had one doctor in town. He was hired by the company, generally was a foreigner. We had what they called a hospital. It was a two-story building--I think I described this before?

Chall: Yes, what I want to find out during this period was what had changed by 1947 or what was changing between '47 and '54. It's the changes that I'm interested in.

Swent: Yes. Well, in the old days there was one doctor. And he took care of everything. He took care of the staff and their illnesses, anybody in town that needed him, any injuries on the job he treated. He was just the doctor for the town, but on the company payroll. Then after unionization they brought in two company doctors. They established a first aid station for one of them up--he lived up at the Arana 10 level in the little town of Socavon. And he had a first aid station there that wasn't really as well

equipped but was something where people who were injured on the job, in the mine, could come to first. Then if it was serious enough he would have them sent down to the hospital in Tayoltita.

Again, that doctor took care of the employees. It was just free medical care for the salaried employees. The union was given a certain amount of money each contract period to hire their own doctor. Originally they had just one down in Tayoltita. Then in later years they had two, and the second one was up at Socavon. He treated the families and the employees themselves for illnesses. But the company doctor still took care of any industrial accidents, any injuries on the job. I think that was the way it was until we left. They had these two systems of doctors. And the company doctors were allowed to have private practice if they wanted to take some--there were a lot of the employees that didn't like the union doctors and still wanted to pay the company doctors and go to them.

Chall: What about your children? You had three children born in Mexico?

Swent: No, we didn't have any born down there. Most of the women--I say most; there were a few who didn't--most of them would go out when they were pregnant, in the last few months anyway, and deliver their child. If they were Americans they would usually come back to someplace in the States and deliver. There were two who didn't: one was Betty Henshaw. She had had two children and she had her third child there in Tayoltita. And that went smoothly; there were no problems with that. The other was a Mrs. Taylor, who was a Canadian. She and her husband had had several children who were killed in a fire in Canada, and they only had their oldest child of the group. So somewhere along the line in Tayoltita they decided they would have another one, and she became pregnant.

But they were hard livers, they drank a lot and smoked a lot, particularly she did. And our doctor whom we had a lot of confidence in, the company doctor, just was beside himself. He didn't really want to have her deliver there, but they insisted they didn't have enough money to leave and go out and come back again on such a short time, and insisted on having it there. Finally he got her down to the hospital almost two months before delivery was due and told her her blood pressure was extremely high and she would have to do all sorts of things. Well, she wouldn't do them.

So finally he took them by Caesarian, about six weeks premature. And talk about new technology. Taking care of premature babies down there--we developed it. We had no facilities, no incubators, no anything for a premature baby. And this was a Mexican doctor by now. We no longer had foreign

doctors. Dr. Ortega said, "Well, get a couple of shoe boxes and line them with warm types of cloth like flannel or something and then suspend a light bulb over them, about six or eight inches over them, and turn the light bulb on and just keep the babies in there. Then we have to feed them." Well, we did this. We isolated a room up in the staff house and put these two prematures in there in the shoe boxes.

Chall: She had twins?

Swent: She had twins! So we put them in these shoe boxes with a light bulb hanging over them. Then we kept it closed up and dark and kept it humid in there with some humidifiers. Then for feeding, Doctor Ortega was afraid to put them on formula because he was afraid they'd get infected and die, and he was probably right. But she couldn't give any breast milk, so she couldn't feed them herself. There were a number of mothers around town who were breastfeeding children, so he got a breast pump and got help from his nurse.

What he called a nurse was really a local girl that he had just trained. She had no real nursing university training or anything. The fact was she didn't even have the equivalent of high school, but she was an intelligent girl. So he gave her a bucket, an enamel-covered pail, and the breast pump and she would go around to the women who were breastfeeding and get some milk for the babies. And they survived. In fact, Lee was one of the contributors. At the time this happened I think Richard, our third child, had been born, and she was trying to breastfeed him, so she contributed to the premature babies, too.

I saw them once, oh, years later, when they were down in Mazatlan. They were about fourteen or fifteen years old, and they were the huskiest children you've ever seen, very good specimens.

Entertaining Visitors and Residents

Chall: There were certain kinds of interesting activities going on in the compound, in the whole community all the time.

Swent: Oh yes. Speaking of interesting activities, we had a visit from one of the stockholders of San Luis Mining Company named Lord Hesketh from London. He had inherited a block of stock from, I think the Tevis family. He was very interested in the project, and he came down and visited. We had this notice by telegram that Lord Hesketh would be visiting. And of course Larry Morel, the manager,

wasn't there. He never was there, he was gone about nine months of the year on one piece of business or another. So it was up to Lee and me to entertain him and his wife; she was coming, too.

This was when we were still nursing Richard through his infancy. We had never met Hesketh and didn't know what he was like or anything, and had no idea what sort of food he preferred. So Lee made up a list of what she thought she could cook and supplies that she needed, and I flew down one morning to Mazatlan and had the airplane wait for me at the airport and I went shopping downtown. I bought all these goodies, flew back into town by midmorning, and then they arrived the next day.

Well, it turned out that there was no need for all this. He had had almost all of his innards removed. He had severe gastric problems and basically all he ate was baby food, of which we had plenty, the pureed baby foods. And she was no problem. She was some chorus girl he had married in London, much younger than he. She got out of the airplane, looked around, and said, "My god, where's the Scotch?" So we gave her a bottle of Scotch and she disappeared. We never saw her for the rest of the visit hardly. We did take him up into the mine and went over everything with him. He was a very intelligent, knowledgeable individual, but she was not. They stayed two or three days and left. And there were lots of parties, and of course, this kept everybody busy--as you say, something happening there all the time.

Oh, they had parties. Every excuse there was a party. In fact, in the early days when I was there, a fellow came to visit named John Hamilton, who was a director of San Luis and was also a director of Homestake. At that time they had the overlapping boards. He was also treasurer for both companies and the chief accounting officer. He came down basically to do accounting and to try to get the year-end accounts into shape. And they kept giving parties and parties and parties for him, and he liked his drinking. So he was overdoing it and he wasn't getting any work done. Finally Larry Morel got an inquiry from my dad as to what kind of a place he was running down there, where the treasurer couldn't get his work done. So the parties got subdued and limited for a while and John got his work done.

Chall: There weren't that many people there in the staff.

Swent: No, as I say, there were five families.

Chall: After you had gone through the five families then--

Swent: Then they would start over again.

Chall: What about a store? Was there a company store downtown or in town, or was that just a general store?

Swent: Well, back in the early 1900s there was a store that was owned by Stuart Rawlings. Maybe Lloyd Rawlings started it, I don't know. But it was owned by Stuart Rawlings when he left. And he sold it to the company in 1915. At that point it became a company store. So the company operated it as a company store for several years. Then with the advent of the unions, they decided it was a good thing to get out of.

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We made sure that there was plentiful stock of beans and corn to get through the rainy season until the next crop here came in. This was a function that was turned over to a cooperative that the union was able to form. The company gave them the funds to form it. They took that function over.

The store was then organized as a separate venture, a separate company, but still owned by the company. But they didn't do the payroll deduction business and all that sort of thing. It was just a straight cash and carry, or if they wanted to have credit, why, that was up to the manager of the store who had an Aztec name. I'm not sure if he was Aztec in descent or not. It was Xicotencatl Davalos. And he and his wife ran this for many years. I guess it may still be going, but it gradually became completely divorced from the company.

Chall: And Lee had to buy groceries there, her staples?

Swent: Didn't have to; you could buy them from Juan Ley if you wanted to.

Chall: Oh, that's right. I'd forgotten about that.

Swent: Although we didn't! [laughter] But the women, once in a while would find that Juan was carrying something that--what we called the "tienda"--wasn't. It was called the Tiendas del Piaxtla. That was the name of the ex-company store. Once in a while you would find that Juan Ley's grocery store had something that the "tienda" didn't have, so they would buy it. The "tienda" had to do a business on a larger scale. They didn't order things as specialties for an individual. Juan Ley would. He was a very enterprising guy. And if you wanted a certain kind of cracker he would order it for you, whereas the "tienda" only carried regular soda crackers.

An Amusing Tale: Finale

Swent: I don't know if I ever finished the highgrading story on Juan Ley. I finished it as far as his going broke, and I went through his problems with the trucking, but years later, after we had moved up here and been up here for several years--

Chall: Moved up to the Bay Area?

Swent: Moved to the Bay Area, and had been all through New Mexico and Lead and finally moved into the Bay Area, I saw in the San Francisco Chronicle one day that Safeway had bought a 49% interest in a series of supermarkets in Culiacan, Sinaloa. I knew that the Leys had all moved out of Tayoltita not long after we left. We left in '54, and a few years later they had moved to Culiacan and opened a grocery store there. By the Leys I mean not only Juan and his son Juanillo and their children, but also Pancho and Ramon who were running the vegetable garden. And they had all gone in and started running a bigger grocery store in Culiacan, and eventually got into the supermarket business and put together a series of supermarket stores there, which Safeway bought 49% of for quite a few million dollars. So I got hold of the Safeway attorney one night here and we had dinner together and had quite an interesting time telling him the Leys' background.

Chall: They certainly did do well. Very enterprising.

Relationships with the Mexican Government

Swent: [referring to list of topics] Now you had here, "Relationships with the Mexican Government."

Chall: Yes. I don't know whether you had much to do with that.

Paying the Inspectors

Swent: No, not in a way, I didn't. There were several phases to those relations. One, of course, was the inspection-type things, and they had all kinds of inspectors. They had weights and measures inspectors, and they had the timber inspectors, and they had the aviation inspectors, and they had the sanitation inspectors, and

the school inspectors, and all kinds of government inspectors--all of whom had to be paid off. I didn't like this kind of business.

We did have one thing running in our favor: under the accounting system that the Mexican government would allow we had what we called an unclaimed payroll account. We had a lot of people who would come in and work a few days and leave and never come back and claim their pay. So this was kept in what we called an unpaid wages account, uncollected pay. And whenever we needed cash to pay somebody off we would draw cash from that account and charge it out as drawn from the unpaid wages account. That's all the accounting that was needed. There wasn't any further cover-up of it than that. And this was an account that was allowed by the federal taxing authorities.

So you would have to pay these fellows off, several hundred pesos each when they came in. And they each came in once or twice a year. And I tried to avoid them. Usually I left it up to Larry Morel when he was there, but once I was there when the aviation inspector came in. At that time we were running a tri-motor Ford, and the Mexican commercial aviation regulations had a regulation that you couldn't carry passengers and cargo in the same compartment of the airplane. But for this particular plane we had gotten a special permit and license which allowed us to carry passengers and cargo in the same compartment. Because it was primarily a cargo plane and passengers were incidental, passenger service.

So he came in to inspect us. We had very good maintenance and everything on the plane. Anyway, he came in and did the inspection, and I tried to avoid him and I hoped maybe if I didn't see him I wouldn't have to pay him anything. Well, after about three days he looked me up at the office and wanted an appointment with me, so I had to see him. He said, "Mr. Swent, I know that you haven't paid me anything yet. But let me tell you about my job. I'm not paid enough in my salary and traveling allowance to cover my expenses. The only way I can make a living is by asking people to pay me when I inspect them."

He told me what the travel allowance was. It was completely inadequate, obviously he couldn't travel on that. They had a per diem system and there just was no question, these people were underpaid. They had to do this in order to get along. So he said, "Now I've inspected your airplane facilities here and your airplanes, and I know you have a permit that allows you to carry freight and passengers in the same compartment. But I can cause you all kinds of trouble by simply sending in a report to Mexico City saying that you're carrying passengers and baggage in the same compartment. They'll investigate you, there will be all kinds of

paperwork, and eventually you'll be all right, but it will cause you a lot of trouble. It's a lot simpler to pay me some money." So I had to give in and pay him off.

Chall: Did he decide what you should pay him?

Swent: Generally they didn't. You decided what you would pay them. But you took your chances. If you didn't pay enough, you got the adverse report. So generally they were paid adequately.

Chall: It's a bad system, isn't it?

Swent: Yes. And it still exists today. I don't think the bureaucrats have improved at all.

A History of Corrupting Influences

Chall: It really provides an opening for corruption.

Swent: Well, it is. You know, the corruption is nothing new with the--they basically had a new government, new bureaucracy since the 1917 constitution, but corruption is nothing new. If you go back in Mexican history you find that during the viceroyalty days there was corruption in the viceroyalty. In the early mining histories--at least the gold and silver mining in Mexico--mining was accompanied by the amalgamation process, amalgamating the ore to recover the gold and silver. The quicksilver was brought over from Spain or brought up from Peru and was carefully controlled by the viceroy. And there wasn't enough to go around to all the mines. It was rationed.

It's clearly on record that the viceroys and these employees were taking payoffs for allocations of quicksilver. This was just an example in the stuff I've read of the corruption that existed then. So there's hundreds of years of this experience in Mexico. How they'll ever do away with it, I don't know. But that was one phase of relations with the government.

Taxation

Swent: Another phase was, of course, the taxation. I really never had much to do with that. Taxation initially was very low in my early years there. They gradually kept on putting more and more taxes.

During World War II the taxes rose and they had in essence what they call production taxes--we would call them severance taxes up here--that after World War II were very high. It was 33 percent on silver (and this is 33 percent of the gross of the silver value) and 19.9 to 20 percent on gold. It was the same thing as the King of Spain had had. They called it the King's Fifth in those days. This was about the same.

Chall: Was that paid directly from the San Luis central office to the Mexican government, or did you have to do that?

Swent: No. The gold portion of it was taken in kind at the refinery. We sent the bars out to a refinery in Monterrey, Mexico, and San Luis paid that there. And then the silver, that was paid when the silver was sold. Then a deduction was made out of the sale and transmitted to the--

Chall: In cash.

Swent: In cash. The refinery would return the silver to us, and the gold also, but they took a fifth of the gold at the time and turned it over to the government. Then when we sold the silver--we would sell that somewhere else--the tax was due.

There were property taxes, of course. They were never really onerous there. Income tax began to get a little onerous. In fact, for years the Mexicans have claimed they're taxed as heavily as we are up here now, or maybe more so, because I don't think they've had tax reform. They've had no Reagan.

Settling Old Claims

Swent: In 1938--now this was a special circumstance--the relations between the Mexican Candelaria Company and San Luis Mining Company got very strained over some claims. Back into the Rawlings day there had been some disagreement on the claims. And they claimed they were overlapping. I'm not sure of all the details, but I do know even Lloyd Rawlings in his writings explained it was a very complex situation that he bought into. At any rate, it really didn't cause too much problem in the early days because the mining that was going on wasn't in the area of legal contention. So this sort of simmered along for years without coming to a head.

But then in the late 1930s in the Candelaria vein, they started mining closer to the San Luis claims. The San Luis Mining Company was mining on the Arana and San Luis veins. These were

gradually getting closer together. So things came to a head and the Mexican Candelaria Company were trying to destroy-- Monuments to these claims by Mexican law had to be marked on the ground with a little stone or concrete monuments. San Luis had put all of theirs in concrete. They have to be at each corner and visible from along the hillside, along each side and end, from one to the other, so that you can follow the line. They began destroying some of these on the hillside and a lawsuit developed. The Mexican Mining Department got called in.

They established a compromise line and the case was put under the department head named Adolfo Garcia, who was a very fine gentleman. He came out. My dad first got acquainted with him when he was surveying a compromise line that was to serve as a compromise until the case could be adjudicated. And I remember Dad going up on muleback--this was still in the muleback days, and I was a kid--but he was going up on the hillside and mountain on some days with several people with him, all of them carrying pistols, armed to run intruders off.

When I was down there on a Christmas vacation the Candelaria company had a surveying crew, oh, just up the hill from the town, from Tayoltita, maybe a half to three-quarters of a mile. It was a four-hour muleback ride back to their camp for Christmas, so they chose not to go. Mother had sent an invitation up to them to come down and have a Christmas with us. They sent word back they didn't dare accept because they'd be fired if they did. The relations were very, very strained.

Adolfo Garcia in later years became a very good friend of my dad's, a personal friend. He was an attorney and a mining engineer, and he was the company representative in Mexico City for many, many years after he left the government service. His place was later taken by an attorney named Luis Guzman Carreon, who really specialized in labor law more than mining law. Adolfo Garcia was a specialist in mining law. But by then labor law had become more important. The case was long since dead, because San Luis eventually bought up controlling stock and they merged Candelaria into San Luis. At any rate, that was a period where the government was deeply involved in our affairs there.

Surveying: Feet into Meters

Swent: Another involvement [chuckles]--this is kind of ridiculous. But I guess back when Lloyd Rawlings first went down there to establish surveys and to do surveying of the lands and everything, he had an

engineer take a sighting on the North Star, on Polaris, and establish a north-south line, then measured a base line to start what we call in engineering a triangulation system. You measure the base line extremely accurately and you take your readings on Polaris as accurately as you can to get a north-south and east-west orientation.

They did the system in feet, in tenths of feet, which was the normal American operating system. In the 1930s the Mexican government decreed that we had to go into meters. In the late 1930s everything had to be changed over to meters. And they brought their own survey in. This was the first time a survey had been brought in to tie in with the local survey. They found out that there was a difference of about three seconds or so--I've forgotten the exact amount--very, very minute amount of difference in the bearing. So they said that the company had to redo all its maps, that is, all the official maps, showing meters and do it on metric scale. And all coordinates had to be rotated by this very small angle.

Well, this was in the day before computers and this was a tremendous job to do. It took years to accomplish. They hired a retired railroad engineer who had lost one eye. But he could still operate a hand-operated calculator. And he spent three years recalculating the coordinates of every point that we had ever surveyed, and then redrawing the maps on a metric scale. It was--

Chall: --a nuisance.

Swent: Yes, it was.

Chall: Was it in 1938 that the Mexicans expropriated the oil fields?

Swent: Yes. And of course there was a lot of talk that they might expropriate mineral deposits and mining companies. So that was another thing. At that time they made a complete duplicate set of all maps. In fact, I worked on this a little bit myself and sent them to the San Francisco office for keeping up there so that in case, if there ever was an expropriation, and if they lost the maps at the mine either through action of some sort or a takeover of some sort, they would have something on which to establish the value that that expropriation should be based on. For years they kept these two sets of maps. Every year they were updated.

Chall: I guess there was always a kind of touch and go relationship, wasn't there?

Swent: Yes, over quite a few years.

Mine and Mill Workers Join the Union

Chall: I was also interested in the fact that mines down there were unionized. Was that done in the thirties also?

Swent: Yes, I think it came about during Lazaro Cardenas's presidency. I think he went into office in '34.

Chall: I see. So at that particular time Americans weren't looked upon with great favor.

Swent: Yes. Well, Cardenas really produced a tremendous wave of nationalism in the country with the expropriation of the oil properties, and it was intensified over what it had been in prior years. He did such things as the metric system requirement.

Chall: Were the mines unionized through the election process that we know in this country, or were you simply told that the miners would now be unionized? Did this include the mill people, too?

Swent: There were no elections. The law allowed employees to form a union and then apply to the Mexican Federal Labor department for a charter. After a union was chartered, the employer had to deal with them. In Tayoltita the union included the mill and mines. There were two locals, one for the mill and one for the mines.

Chall: I see.

Swent: But they were basically the same union. I wasn't there for it, but I know the process was that the government would send somebody in, or they would have an agitator to come in and get the workers to organize and write to Mexico City for a charter for a union. Theoretically, under the labor law, the labor department is supposed to issue a charter to a local union. But they didn't. They would then send out organizers from the chosen national mining and milling union--there was one that the government backed. And then they would send representatives out to convince the local people, well, you ought to join this union, because it's government-backed, and for this and that and the other reason. This way they built up a pretty monolithic union in the mining industry throughout the country.

Fortunately they never bargained on an industry-wide basis. They always bargained on an individual operation basis. The mines didn't ever go together and try to go on an industry basis.

I mentioned that San Luis eventually acquired the Mexican Candelaria Company. But before they did, they went through an

intermediate stage where Candelaria went out of business. They shut down their operations in San Dimas and in Contra Estaca and leased them to San Luis. Now San Luis could connect to the Candelaria mine through their own workings. They did that, and then they paid them a royalty on the ore that they extracted from the Candelaria vein during the lease period.

Then we also leased the Contra Estaca property. It was about four hours' muleback ride away from Tayoltita. It fell to me to go over there. Well, first I was in charge. We brought a geologist over and he looked through the mines and the mine records and did some exploration work there and developed a very significant little ore body that they had missed. They probably would have found it if they had continued operations, but they were forced out of business by rampant union problems and high wages and low productivity. This was what really forced them out of business, not lack of ore.

And we found a 100,000-ton ore body, mostly a high-grade silver ore body. It didn't have much gold in it. The veins there ran across a very steep canyon, an arroyo there. It's interesting--on one side the vein ran very high in gold and low in silver, and on the other side, a separate ore body, the same vein ran higher in silver and lower in gold.

Our geologist, a fellow named Benham, an oldtimer in the business, found this silver ore body. So we decided we would develop it and build a little 50-ton mill there, a flotation mill. We got the flotation cells, again from Homestake, from this plant that they dismantled in Mulege that they had installed for manganese recovery and had to shut down when the price of manganese collapsed. They closed it down in '47, practically never operated it. And we bought these flotation cells and installed them in Contra Estaca. I guess it was probably 1950.

When we started up there, we started up non-union. At first the people were grateful for jobs and this sort of thing. It had been shut down for two years when we went in. Most of the troublemakers had left and we started in and had no problems. In fact, we never did have any serious labor problems there in the short time that we operated it.

But there were a few people there that thought they ought to have a union and they came around and said, well, they recognized the problems that they'd had with the old union and wondered if we would go with them on a company union basis. So we agreed to do that. We figured that that was better than having them--if we said no--try to get the old union back, the national union. So they

went through with this and formed the local union. It was intended to be a dummy affair. The leaders were working with us.

[Date of Interview: November 20, 1987] ##

Chall: Last week when we finished I made a note that we were going to start with more information about the company union. We started to talk about it.

Swent: Well, as I recall we were talking about having some men in Contra Estaca who wanted to form a union, and we decided to try to form a company union rather than have them affiliate with the National Mine and Mill Workers' Union. And they filed a petition to be chartered. Under the labor law they had to send in to the federal labor department and try to be chartered as a union. And so they did this.

One evening, however--it was very unfortunate--but two of us, myself and a gentleman named Roberto Iriarte who had been brought in to run the Contra Estaca operation--he was of Basque descent but was a Mexican citizen--were talking with two fellows from the local union. We were sitting out on the steps of one of the buildings. It probably was not a wise thing to have done, as it was still light and some other workers walked by. This was after work hours, but some of them walked by anyway and saw us there talking.

As soon as that happened the two fellows that we were talking to said, "Oh, it's all finished now. We've been seen." Nothing really happened from that, but in the long run the request for recognition in Mexico City was just not acted on. They just kept not getting any answer, no matter how much they followed up on it. Months went by. And in the meantime the labor department notified the National Mine and Mill Workers' Union that there was this movement on in Contra Estaca, and eventually they sent an organizer in to talk with these people at some of their meetings and convince them that the advantages of joining the national union were greater than trying to go it on their own. Eventually they won out. So the union that was finally recognized there by the government was the national union.

However, everybody's memories were fresh about the debacle that they had had with the Mexican Candelaria Company, where the union had gotten just out of hand and raised wages extremely high, and then finally basically created the conditions that led to the shutdown and abandonment of the operation by the Candelaria company. So they were never exorbitant in their demands to San Luis. Most of them were grateful to have the operation back. Of course, the operation was nowhere near as large as it had been

under the Mexican Candelaria Company. They had been operating at, oh, maybe 125 to 150 tons a day, and we were operating at fifty.

The Contra Estaca Mine

Swent: We bought the old mill but we didn't use it. The old mill was a cyanide countercurrent decantation plant, very similar to the one in Tayoltita. What we did was to bring in some equipment, again, from the failed Homestake manganese venture in Baja California. We brought in some flotation cells from there and a small crusher and a ball mill, and we established this little flotation plant which was designed for us by Mr. Woodworth up in San Francisco. At least he designed the flow sheet. We designed the plant ourselves and built it.

The principal builder, the fellow in charge of the construction, was Jesus Cansino, who was a very good Mexican master mechanic. He had that position over in Tayoltita. And he was given time to go over to Contra Estaca and take charge of this construction. One of his claims to fame was the fact he was related to the screen star Rita Hayworth.

Chall: Did you ever raise the amount of material? Let's see, you said it was just fifty tons.

Swent: That was the amount of ore that we treated a day.

Chall: Did you ever get more out of it, or try to?

Swent: No. It never really got going. It was really a clean-up or salvage operation that was permitted basically by the fact that the Mexican Candelaria Company had shut down because of their skyrocketing costs, and they had not really mined everything out that was economical, but it was essentially a clean-up operation of things that were still left.

Chall: Then did it close out after this?

Swent: Yes, it closed out, but not until after we left. We left in 1954 and it was still going then at this rate. We produced a concentrate; we didn't produce bullion there. At Tayoltita we produced what was called a doré bullion, which is a mixture of gold and silver bullion. And we actually produced bars which were shipped out.

At Contra Estaca we produced a concentrate, which is much bulkier. All the sulfide minerals in the ore were floated off away from the gangue minerals, then collected in what was called the bulk concentrate. We made no attempt to separate the different sulfides. The lead sulfide was primary, but there was some zinc sulfide present. And of course, iron sulfide, pyrite. Those sulfides carried the gold values.

Then we shipped the concentrate in sacks to the Penoles smelter in Torreon, in the state of Coahuila, Mexico. The sacks had to go by truck from Contra Estaca down the San Dimas Arroyo to the Piaxtla River and then down the river by truck to the railroad station at Dimas on the coast. Then we would ship it by railroad car. The railroad cars had to go from Dimas down to Mazatlan and Guadalajara and down to a railroad junction called Queretaro, which is where the coastal railway joins the central railway coming down from El Paso. And then the cars would go north to Torreon, Torreon being on the main line from El Paso to Mexico City.

The Penoles smelter there was a lead smelter. It was basically designed to treat lead ore and lead concentrates, meaning those which had predominately lead mineral in them. It was a subsidiary of the American Metals Company in New York.

Chall: Oh, that sounds like a very expensive process, traveling all that way down. It must have paid off.

Swent: Yes. The freight rates weren't too bad. It was far cheaper than trying to further refine the ore. We considered cyaniding the concentrates and did a lot of experiments on that, and maybe trying to combine it and then put the bullion into the San Luis bullion. But the equipment that was needed and the hassle that was involved just weren't worth it.

So anyway, this was my first involvement with the smelters. At some point I made a trip over to Torreon and went through the smelter. It was also my first experience with selling to a smelter and the sampling processes involved and the assaying processes involved and some of the customs of the industry which is that the smelter is always low and the seller is always high in his statement of what's in the concentrates.

Professional and Personal Activities

Swent: With regard to professional activities, in 1951 I went out on vacation--well, I guess we went out in December of '50, and went on

vacation to Lead to visit Lee's folks. We stayed with them there for Christmas and then in early January I started back. I had made arrangements to visit the Climax molybdenum mine in Colorado. In the dead of winter the snow was piled all over the place. It was even more so than at Lead. Then I also visited the Idarado mine which Homestake had an interest in. That was a lead-zinc mine near Ouray, Colorado, the center of a large mining area in the Rockies.

Then I worked my way down to El Paso and down to a town in Chihuahua called Parral. There I visited two mines. One was called San Francisco del Oro, which means San Francisco of the Gold. Actually it was not a gold mine, it was a base metal mine, basically lead zinc mine with some silver content. A very large mine, very interesting. Then in the same area I visited the Santa Barbara Mine of the American Smelting and Refining Company. That was also a very large lead zinc mine. They had somewhat different mining methods. And I spent several days visiting those two properties.

Then I went further south, to the Zacatecas area, and visited the Fresnillo Mine.

That's the doorbell, I'd better go check it.

[Tape interruption]

Chall: You said you visited the Fresnillo Mine.

Swent: Yes. That was another large lead zinc mine with a high silver content, a very large operation. That was the largest of all of these operations that I visited, except Climax.

Chall: Were these Homestake subsidiaries or were they mines that you were interested in seeing?

Swent: They were all completely independent. Homestake did have an interest in the Idarado mine. I'm not sure what the extent of their interest at that time was. At later times they held 20 percent of it. It was basically a Newmont venture.

Chall: And the molybdenum in Climax--that's a different type of mining, isn't it?

Swent: Yes. It's underground. It's a block caving operation. The others were not block caving. That's the only block caving of the ones that I visited.

Chall: It's the way they shore up the underground?

Swent: Well, there is no shoring up; that's it. The method of mining is to undercut an entire block of ore and then remove the support and let it cave, and just remove the broken rock that's caved. It's a very cheap--it's only suited to large tonnages and to rock that will fracture correctly in the caving process.

Chall: I see. Is that used anyplace else?

Swent: Oh yes.

Chall: At any of your mines?

Swent: No, we don't use it anywhere. Homestake doesn't use it and San Luis didn't. The mining methods used at San Luis were mostly--well, we used shrinkage stoping, cut and fill stopes, and a few open stopes.

Chall: What was the point then of going to Climax?

Swent: Well, the point of all these visits was just to increase my knowledge of the industry. I was getting a little stir-crazy, I guess you might call it, being isolated in this particular type of mining that we were in, and I wanted to see other mines.

Chall: Okay.

Swent: Anyway, just as I got back to Tayoltita from that trip I got word that my mother had died. So I traipsed on out again, back up to Piedmont where my dad was living. I was there for the funeral and then stayed about a month until he was recovered. Lee had stayed in Lead and she was pregnant with our second child, and she had our older boy, Kim, with her. So she came directly from Lead. In fact, she was on her way to Tayoltita and somebody managed to get word to her in El Paso, and she turned around from El Paso and came to Piedmont also.

Chall: Were your parents living in this general neighborhood in Piedmont, where you are now?

Swent: Yes, they lived at 59 Lincoln Avenue, just a little over a block away from where we are here now. They had moved in there in 1948. Anyway, after my mother's funeral I stayed on for about a month with my dad to get him through his crisis. Lee stayed on even after that. She stayed on until--by then it was so close to her delivery time that she stayed on until April when our daughter Christine was born.

I took advantage of that period when I was here to go visit the Brunswick mine. I think I mentioned this before.

Chall: Which mine was this?

Swent: The Brunswick mine in Grass Valley. I think I described that visit once before in connection with the Swedish drills and Swedish steel.

Chall: Oh yes.

Swent: Anyway, we went back to Tayoltita eventually. Lee came down several months later with the two children.

An Adventure To and From Mexico City, and on the Yaqui River

Swent: Then in 1952 the American Institute of Mining, Metallurgical and Petroleum Engineers had its annual meeting and convention in Mexico City. So Larry Morel basically emptied the camp. He did not go; he stayed at the camp and sent all the other members, almost everyone, all the Americans. They were members.

So we all went to Mexico City, and we had a very interesting development on that one. Lee, the two children, a maid and I flew down to Mazatlan. We had reservations to fly on to Mexico City, and we had two or three days' leeway. We took a taxi from the airport into Mazatlan to take a rest in a hotel room that the company maintained there, in the Belmar Hotel. The taxi driver was a fellow that we had known off and on over the years, and he asked us where we were going. So we told him and he said, "Oh, I'll make you a deal. I'll drive you to Mexico City, you pay me for that, and I'll drive you back. Then while you're in Mexico City I'll be your taxi." We had not ever driven down that way, and Lee was interested, so we thought about it for a couple of hours and took him up on it, negotiated the price, and cancelled the airline tickets and took off about noontime, headed south.

Oh, we also had with us one of our maids, a girl named Heladia, whom we had also taken to Lead the year before and was with Lee when she was in Lead with her parents, and was turned around in El Paso and stayed at my dad's then. So she was a fairly seasoned traveler.

Chall: You had babies, really.

Swent: We had the two children. That's why we had brought her along, because we didn't want to be hampered by the children in Mexico City at the convention activities. So we headed just straight down to Mexico City. We didn't try to do much in the way of

sightseeing. Of course, we didn't have any hotel reservations anywhere.

Chall: How long of a trip was that?

Swent: Well, I think it was about a day and a half. I don't remember where we spent-- I think we had to spend two nights on the road, because we got a late start the first day. But one of the places that we had to stay was Guanajuato. We got into Guanajuato in the evening, and no hotels were available. There were hotels but they were all filled. We couldn't get into anything. And we had a terrible time finding a place. Finally we got a little lodging that was a very low-class thing. It was kind of a bunk that was just carved out of the side of the wall, a double bunk and we had the bunk in there. Then Heladia and the two children went into another room. It was a similar accommodation. She was very distressed with all this, and so were we. But we lived through it and went on into Mexico City.

As we got close to Mexico City, maybe fifty miles out, Luis was driving--he was the taxi driver. And he kept passing cars on curves and on hills, on the two-lane road. I warned him; I said, "Gee, you shouldn't do that. It's dangerous. There might be somebody coming the other way." "Oh," he said, "there's never anybody coming the other way." Well, it turned out that he had been a taxi driver in Mazatlan which was not all that sophisticated a city. The experience he had there was, you just went driving through the intersections at full speed, just blowing your horn. So finally for the last fifty miles I decided I had to drive. I took over the driving and drove in the rest of the way.

Chall: [Chuckles]

Swent: So then we got into Mexico City and got into our hotel. We stayed at the Reforma Hotel, which was fine. The next day he showed up to be our taxi driver. One of the reasons he wanted to go to Mexico City was he had an aunt who lived there and he wanted to visit her. He stayed with her that night. The next day he showed up. We were going to go to the convention and he was to drive Heladia and the children around to see some of the sights in Mexico City. He came dressed up, just fit to kill, just really wild clothes on. Heladia wouldn't even talk to him, she was so furious over the way he was dressed.

Chall: She didn't know what he was going to be up to!

Swent: So we did a few things with him. He just had a terrible time with the Mexico City traffic. We tried him as a taxi driver for a day or so. We had just terrible times. We would get into these

traffic circles on Paseo de la Reforma and you had to get into the right lane to get off at the right street, and if you weren't in the right lane you missed it, and you went on and you had to go blocks and blocks to get back.

Chall: Like any European town.

Swent: And he missed these. Finally we just dismissed him as a taxi driver and said, "On such and such a day we're leaving," and let it go at that.

The convention was fine and interesting. We had a very nice time in Mexico City, saw lots of people that we hadn't seen for a long time. Then when we came to leave there were some field trips organized, one of them being back in Guanajuato, which was a great big silver mining center at one time. In modern times it again is mining silver after a long period of shutdown. But nowhere near the scale that they originally did. So we decided we would take one of those field trips.

We drove back to Guanajuato, and this time of course we got into a decent hotel through the field trip. And we visited the old Valenciana shaft, which is an octagonal vertical shaft, fifteen meters across the flats, I think, a vertical hole down into the ground that the Spaniards had dug. It represented a tremendous amount of work, a marvelous shaft, sitting out in an open field with just a fence around it, no activity. And then another shaft where there is some activity. A modern hoist had recently been put on one side of the hexagon.

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They used the flat-sided hexagonal design for horse whims. These were wooden hoists that were powered by horses walking around in a circle pushing wooden spokes projecting from a main shaft that turned a dram which wound up a rope and hoisted a bag. They used bags to hoist ore and water in. They didn't have buckets the way we do now. They still power some pumps in Spain with horses. I saw several pumps operated this way.

To get back to the flat sides on the hexagons: By having a flat side that way they could put a horse whim on each of these flats. On a circle they had less space and they interfered with each other more. So they had a horse whim on each of the flats, and that gave them more capacity to hoist.

After Guanajuato we headed back to Mazatlan and had an interesting drive. We went through Morelia, which we had not been through before, and Guadalajara and Tepic. We were approaching

Mazatlan. We were maybe fifty, seventy-five miles out, down on the coastal flats and it was getting dark--it was dark. We were going to go on, driving into the dark, because we could get into Mazatlan at 8:00 or 9:00.

Chall: Luis was driving?

Swent: Luis was driving. We were on a long straight piece of narrow road and he picked up two pairs of animal eyes in his headlights. And he was driving pretty fast for that road. One set of eyes was on one side of the road, one was on the other. This was open range where you could get burros and cows and dogs and all sorts of things on the road. And he kept on at the full pace. I said, "Gee, Luis, don't you think you ought to slow down? There are a couple of animals ahead." "Oh," he said, "I'll go right between them." Well, he kept on and we got up close to them and they were two cows facing us. Then there was a third one in between, with his rear to us, with no eyes to give it away! [laughter]

Chall: Oh no!

Swent: He had to jam on the brakes. We didn't crash, but we almost did. It was a real close thing. Then the cows just ambled off and we continued.

Chall: You have to have steady nerves to drive in Mexico.

Swent: Yes! Then in early 1953 we had another trip. I went on a tour. San Luis had been doing some exploration work. Benham was now in charge of exploration work up in northern Sonora, just down from the border with Arizona at Douglas, Arizona, and a little bit south of the old Phelps-Dodge plants at Nacozari--this was an old copper place--and not far from the Anaconda operation at Cananea. That's also a very large copper operation which is still going.

At any rate, we had been doing some exploration work and had several prospects on which they wanted to do geophysical prospecting. I took advantage of the trip. I had gone out to go to the American Mining Congress in Los Angeles. They had their annual convention in Los Angeles that year. Then on the way back I visited a number of these properties with Benham. He had a four-wheel-drive jeep that we used to get around. They were all raw prospects. We took sleeping bags and left our suitcases in a little town and just took what we needed to camp with and visited these prospects.

Chall: What was Homestake interested in?

Swent: This was San Luis Mining Company.

Chall: What were they interested in doing?

Swent: Well, they were just interested in finding preferably precious metals, but they also were willing to take base metals. And in fact they did find a fair base metal prospect that was eventually mined. But they were essentially looking for precious metals. That's what they would have preferred anyway. You're not always sure what you're going to find.

One of these prospects was south of the Yaqui River, which is one of the big rivers in northern Mexico, a long one. We had left our goods, bags and things, in a town on the north side of the river. It was threatening weather, threatening to rain. In fact, it did rain a little bit on us. We crossed the river and went to this prospect and we planned to sleep there that night, and we did. It didn't rain on us. But it started raining in the early morning. We started back in the jeep and got worried that we might have trouble with the crossing of the Yaqui River, because it apparently had been raining east of us and might have made the river rise.

Well, we got there, and it had risen some. We entered from one bank and had to go between a couple of big rocks. It had risen far enough that Benham couldn't really find the track any more. We got between these two rocks and got into some quicksand there. Even the four-wheel-drive got stuck and couldn't get out. We labored and labored. We cut bushes and branches and stuck stuff under it and just couldn't get it to move. So we finally left it and crossed the river on foot. It still wasn't too deep. We could cross it.

Chall: How were you dressed?

Swent: Oh, just with rough clothes, khakis.

Chall: Boots?

Swent: Heavy shoes, yes. Not necessarily boots. Then we walked several miles into town where we had left our goods. We hired some horses and some rope and tackle that we were able to rent and went back. Benham thought we could pull the jeep out with the horses and the block and tackle. Well, we got back there and the river was rising.

Chall: And the jeep was sinking!

Swent: The jeep was under more water, but we were still able to cross on the horses. We tugged and tugged with the block and tackle and just couldn't move it, and the river was still coming up. We were worried that we might not be able to get back across, even on the

horses. So finally after several hours of hauling and pulling on this jeep we gave up, took everything out of it, and crossed back on the horses. We just barely made it. The river was rising fairly fast. We rode back into town through this pouring rain--it was raining all the time--and got back to town and warmed up. It was fairly cold with all the rain and wet and everything. We changed our clothes and warmed up and spent the night there.

The next morning I was scheduled to go on back to the town of Hermosillo and then fly back to Mazatlan from there. So we got word the next morning that the river had risen something like ten feet. The jeep wasn't even visible any longer. So I went on and left Benham to his problems and then went back to Mazatlan. Lee met me there. She had come to town to meet a cousin who was going to visit us, so then we all went back to Tayoltita.

Just to end this story--after the river went down, a month later, Benham was able to get the jeep out. He didn't try to start it, he just took it apart and had it taken into town and cleaned out completely and then put back together. He used it for a long time after that.

Family and Social Life

Swent: [looking at list of topics to cover] Now let's go to this "Family and Social Life" business. Oh, you had one item up here: "Chinese Cooks, Gardeners." Now the gardeners I've mentioned. We had two Chinese cooks. One at the main camp in Tayoltita, at the American colony there, for the staff house, and then another one for the staff house at the mine office at Cinco Senores. They were unrelated and there were all kinds of funny stories about them and their problems. A lot of them didn't speak either Spanish or English very well. We had a succession of them, but generally they would stay for quite a little while.

Chall: That would indicate that there was a fairly good-sized Chinese community, then, in the area.

Swent: No, not really.

Chall: If they never learned to speak either of the other languages.

Swent: Well, they had to get along on what they could, but they were actual Chinese immigrants and were learning the language. But there was not a large Chinese community in our area.

Chall: Were they mostly men coming alone?

Swent: Yes, oh yes. They were all single. One of the stories we have there is, in the last year or two that I was there San Luis put in a life insurance program as sort of a fringe benefit. And of course this Chinese cook had his insurance. They called him into the office one day and said, "Luis, we have to have a beneficiary for your insurance policy. Who is your beneficiary?" Well, he didn't know what a beneficiary was, so they explained to him--it was someone to whom the money would be paid if he died. He said, "No gottum beneficiary." So then he came back in a few days and said, "Gottum beneficiary." He gave the name of some woman that he had hooked up with. [chuckles]

Chall: I forget about Juan Ley--had he married a Mexican woman?

Swent: Yes.

Chall: So they did intermarry then, the Mexicans and the Chinese.

Swent: Yes. In fact, one of the girls that worked in our office, Maria Aghe, was the daughter of one of the Chinese cooks, Jose Aghe, and a Mexican woman. And she was a stunning-looking girl. She was just the pride of the office, and a very good clerk, too. She was a very sought-after girl in Tayoltita. But they were still few and far between. Maybe not more than three or four in town. The town was about four thousand, with maybe another thousand living up in the Socavon area.

You asked how did Lee's introduction to Tayoltita differ from my mother's. Well, of course, there were tremendous differences. My mother rode in five days on muleback and Lee came in on the airplane. When Mother arrived it was New Year's Eve and they had a big all-night party that night, at which she danced all night. Lee came in in August and it was an uneventful arrival. Our home was in the American colony, in a house that was right next to the staff house. We lived in that one for about three or four weeks, and we knew as soon as we arrived--Paul Avery had resigned and was leaving, and Larry Morel had said that we could have his house, which was a little better one, if we wanted it. So when they left then we moved over and purchased their furniture. We had been getting along on pretty skimpy furniture up until then.

Lee didn't know any Spanish, but she did know French, so she dove right in and started learning Spanish and did a very good job at it. We hired a maid, but I had to make all the arrangements because she couldn't really speak to her at first. She would sort of use sign language and a dictionary, but little by little she got better. But in the early days she would tell me at night and I

would help her at night. She would tell me, now, I want to tell this girl this or that or the other thing. So I would write out notes for her that she could read to the maid.

The Avery house that we moved into, we lived in for almost six years. Then, about a year before we left, the Henshaws left. They had added a room and a closet to their house. So their house was bigger than any of the others in the American colony. So when they left, we moved into that house for the last year that we were there.

By then, of course, we had three children. As far as playmates, one of the questions you had was, were there more playmates? And yes, there were far more for them than I had had. When my brother and I were growing up, at times there was only one other American child there, and that was a girl named Dora Wark, who was the daughter of the metallurgist there. She was my brother's age, so she was a good playmate for him. They played together a lot. There were very few Mexican staff at that time. By the time I was having children there, we had a fairly sizable Mexican staff, and a lot of their children were playmates for our children, as well as American children. There were several other American children around the same age. So that was a somewhat different experience.

But the kids all spoke Spanish. With the maids there, Heladia that we had taking care of them, and the other maids around the area and the children that they played with--they all spoke Spanish. English was really sort of their second language.

Chall: Is that right? Did you speak English to each other in the home?

Swent: Yes.

Chall: And then they spoke Spanish--

Swent: They spoke Spanish to all the other children and to the maids and anybody else. But they spoke English to us, and we spoke English with them. They understood the English. They learned it very well. And they knew who to speak English to and who to speak Spanish to.

Chall: So they were bilingual.

Swent: It's something they picked up very early.

Chall: That's very good.

Swent: The medical help there, of course, had improved greatly from the days that I was there. I wouldn't say that they had a better class of doctor. I think the class of doctors they had was always good. But of course medical knowledge had improved greatly, and we had more doctors. The community now had four doctors, and when I was a child they only had one. It was all now Mexican doctors, by law. But they were all good. The ones that we had were very good. The one that we had the most to do with was Tomas Ortega. We just had tremendous confidence in him, and one of the reasons was that he had no pride of profession, so to speak. He was quick to say when something was something that he couldn't handle, "You should go outside for this." He didn't mislead you into thinking that he could handle it and then find out he couldn't.

Chall: Were your children generally pretty healthy?

Swent: Yes. Yes, we didn't have any serious problems, although he solved one very serious one with Christine. At the age of two or three years, she was rather weak and pale. He said she needed some sort of tonic, and he recommended a French tonic called Chofitol, which was made from artichokes. I had never heard of this, but anyway we sent for it, to Mexico City, and got it. She did improve, dramatically.

Chall: That was a really old-fashioned cure?

Swent: With regard to the Mexican community, of course we had lots of interrelationships. In the first place--I should go back and get one thing fairly cleared up here, and that is this whole drinking business. The mining profession in general is a very heavy drinking group, and Tayoltita was no exception.

Chall: You're talking about the professional engineers as well as those who went underground?

Swent: Yes.

I had been a heavy drinker, particularly in my college and navy days, but I had decided it was too much. And Lee drank a little bit when I first met her. Her parents did not. And she was having troubles with her parents over this, also over smoking. I talked her into giving both of them up, just to have better relations with her parents, if nothing else. It wasn't worth this trouble. And this worked very well. But it was a problem to us in Tayoltita, where the main source of entertainment was drinking. We were kind of set apart socially from the American group because we didn't serve liquor when we had people over for dinner and that sort of thing.

Chall: You mean you became teetotalers?

Swent: Just about, yes. In fact, very much so there. And the level of sophistication of the American wives was not very great. Most of them were geared to the party circuit. So Lee actually preferred Mexican company to the Americans.

She participated in a little custom there that they had that had been going on for many years. I'm not sure who started it, but it was led by the American women. The married Mexican women participated in it. They would be the wives of the Mexican staff. Every Tuesday afternoon, I think it was, the wives would get together and do sewing. They would embroider dish towels and all sorts of things, make little things that they could sell. They sold them and they pooled all the money that they got from these sales and used the money to buy corn and beans, which they gave out once a month. They had a day when they gave out the corn and beans to what they call the pobres, the poor people of town. They researched their condition to see that they really needed it, and tried to sustain a few. They usually had fifteen or twenty on the list, people that they fed this way. And she enjoyed that very much.

Chall: Was she, would you say, among the American colony there, a leader among the women?

Swent: Not really. The leader was, of course, Mrs. Morel, the manager's wife.

Chall: That is expected?

Swent: That's expected in the business. We had to step in every once in a while because the Morels were gone a great deal. But they were usually there for all the big occasions. There was an annual Thanksgiving party, but this was generally restricted to the Americans, because it's not a Mexican custom. And the same way for Christmas. We usually had a big Christmas breakfast and a Christmas dinner. This was limited generally to the American group.

Chall: But the Mexicans celebrate Christmas in a big way.

Swent: Yes. They celebrate it somewhat differently. Their big celebration actually is in January, on January 6, Twelfth Night. A lot of their traditions are built around that. Although they now go in for Christmas. It's been commercialized just as it has up here. But the traditional celebration in Mexico is really more what they call "Las Posadas." This is a series of parties leading up to the Twelfth Night celebration.

Then on New Year's, this was the real party of the year. On New Year's Eve the company gave a big party in the recreation part of the two-story building, the club part, and invited all the American staff and all the Mexican staff and their families. It was an all-night thing, just the same old tradition that my mother stumbled into in San Dimas the day she arrived! [chuckles] They danced all night. It was traditional that they stay up all night. The party usually lasted till about six o'clock in the morning. They would generally bring in a band from the outside, because the Tayoltita band was pretty miserable. And the company paid for all of it. The New Year's party was the big, big social event of the year.

Lee formed many good friendships among the Mexican women. We were particularly friendly, both of us, with a family named Cordova.

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Don Marino Cordova had known my folks since they had arrived, and were very friendly with us. We enjoyed them. They lived very close to the American colony, just across the street from it, in a company house. He had a job, sort of the company's--you might call it today government relations, because he took care of all the odd jobs that had to be taken care of in government relations. If we had a tax problem, why, he was the man that handled it. Basically it meant knowing your way around the government procedures, and knowing if somebody had to be paid off, who the proper person to pay off was, and how much, and to negotiate it, that sort of thing.

Chall: Was this friendship of yours with the Mexicans frowned upon in any way by your compatriots?

Swent: Oh no. I don't think they frowned on it. We were always sort of perplexed by why some of these people didn't learn Spanish better. A lot of them made very little effort to learn Spanish, and what Spanish they did learn was very poor.

Chall: That limited their social life.

Swent: Which limited them, yes. But some of them were very friendly. One of the fellows there was named LeRoy Briggs, and he was the son of a close friend of my mother's in San Francisco. He worked there for many, many years. He was there when we arrived and he was there when I left. He worked there about twenty years. They were very partial to the Mexicans. Skinny--that was his nickname--had learned Spanish very well. And his wife, Jane, had too. She was a very bright woman, but an alcoholic. She eventually died of brain

cancer. We saw Skinny once, in 1962, when he made a trip to Grants and looked us up.

Three other American families that made an effort to learn Spanish and with whom we made good friends were the Henry Colens, the John DeLeens and the Breck Parkers. Colens did the best job of learning Spanish, and later lived in Monterrey for many years.

Another family that we got very friendly with lived in Mazatlan, and were named the Escutias. This is sort of a real aside, but he was the president of the Banco Occidental de Mexico S.A. That was a local bank in Mazatlan that had been run by an old family named Echeguren, which was actually a Spanish family but had been established in Mexico for several generations. But they still had family in Spain who held a lot of the ownership of the bank. My dad knew the Echegurens. In fact, they were agents for San Luis in Mazatlan for many years. Through his connections with that family, Dad learned when the control of the bank was up for sale. He managed to slip in and take advantage of it and put together a local group who bought this control.

Chall: You father did?

Swent: Yes. Once they acquired it, the person that they put in in charge was Hector Escutia. At the time I was there I made two small investments. There were a few shares of Banco Occidental stock available for purchase, and I bought them. Then I bought $250 worth of shares in a local brewery that my dad was always telling me he had had an opportunity to invest in, back when he first came to town in 1915, and had turned it down. He said that was the worst mistake he had ever made. It had just prospered and prospered and prospered. So I bought 250 shares of it at $1 apiece when we were there. That was Cerveceria del Pacifico S.A. And the brewery paid nice dividends. The bank stock was sort of a foothold in the door with it. Years later when my dad died in 1968, he had a very large block of bank stock. He split that between me and my brother; we inherited that.

Chall: Had it appreciated?

Swent: It had appreciated very well. The bank just did exceedingly well. It became the dominant bank in Mazatlan, and established branches from Tijuana down to Guadalajara.

Chall: How did the Cerveceria do?

Swent: Cerveceria del Pacifico did beautifully. It eventually got bought out by a major brewery in Mexico City, Modelo, which is a nationwide brewery. The Mazatlan one was a local brewery and just

served a local market. The family that controlled it there, the Villafuentes, advised all the other small stockholders when they decided to sell their control to Modelo and advised them that they could get in on this favorable price. It was a pretty fair price--I don't remember what it was--but I decided not to do it. I had been so intrigued by my dad's stories about how good an investment it had been and how he was sorry he had never gotten in it, I decided I'd hold it.

Hector Escutia told me, he said, "Well, you know, if you don't take this Modelo deal, they're going to just use this as a loss leader, not pay any more dividends. You really ought to sell." He was counseling me to sell, but I didn't. I held on to it until we went to the States and long afterwards. I became the only minority stockholder in Modelo. They finally merged it together, and I in a way was sort of a thorn in Modelo's side with this very small holding that I had. Finally, when they got into the big reorganization program that needed approval of 100% of the stock ownership, they bought me out for $8,000. So that was a pretty fair return on my $250, even though I had to wait several years for it.

Chall: That's all right. You were patient.

Swent: Yes. And that was a lot better than having sold out earlier.

Intrigue and Danger in the Community

Swent: But let's see, what else do we have here? [looking at list of topics] Well, one of the events that happened while we were there--and this is sort of unconnected with what we said before--we had a big scare one year in the later years that we were there. Larry Morel, the manager, received a threatening note to the effect that if he didn't put so much money--and I forget the amount, but it was a fairly significant amount of money, many thousands of pesos--in paper bills into the mouth of a culvert that was under a trail that led to the workers' housing over by the air field, that one of his children would be harmed.

Now the company at this time had a very capable chief watchman, a fellow named Chencho Bastidas. He was really in charge of all the confidential watchmen who were at the various mine portals, searching men who came out of the mine for stolen highgrade and this sort of thing. And he had a very responsible job. He was a real live wire. Of course, he traveled around with his revolver and cartridge belt on him all the time, dressed very

well. He was a very snappy-looking character, looked just the part.

So Larry got him into it, to try to investigate and find out what this was all about. They couldn't find any trace of where this note came from or anything. They put some special guards around the Morel house. And they decided that they would put a bundle of paper as if it were notes in the place where it was designated at the end of this culvert, where it came out from under a trail, and then stake it out, in essence. They would have several of the watchmen hiding around to watch who retrieved it.

In the meantime everybody was just very much on edge. This got around. The Morels warned everybody, of course, so that they would know what was going on. We had one scare. Somebody--it actually turned out to be a mechanic for the trucks, one of Mario Ferriera's mechanics--walked by between the Henshaw house and ours, carrying a piece of tubing from one of the trucks in his hands. One of our maids saw him, just got a glimpse of him going by, and mistook this tubing for a rifle. She reported to us that this man had just walked by there with a rifle. Oh boy, we got all excited and started investigating and trying to run it down. It took about a day to run it down. We finally found out it was just a mechanic with some tubing. But this was the type of thing that just had us all on edge.

Finally the day came when this ransom or whatever you want to call it, extortion money, had to be paid. So they made up several envelopes with pieces of paper cut out the same size as bills and ostentatiously put them in the culvert in envelopes so that you couldn't see what was in the envelopes. Then the watchmen were staked out. They stayed there all night and they said that a fellow came down there, and they were waiting for him to lean over and pick up the package. He came and he stood at the end of the culvert, but he never leaned over. The order had been given not to arrest anybody until they had actually leaned over and they had him with the stuff in his hands. The fellow stayed there for a long time, but he never leaned over, he just stood there and stood there and scuffed around with his feet. But he never leaned over. There was enough moonlight that they recognized who it was. But he went off. Then after he left they went and looked in the culvert and the packages were gone! They don't know how he did it. But he had managed to get them with his feet in this shuffling around, whatever he was doing.

Chall: [laughter] That's incredible!

Swent: Well, they recognized him, so they went and arrested him anyway, and he had the envelopes with the blanks. It turned out to be one

of the schoolteachers that was actually paid by the company, a man, that taught in the school that was in this housing area, the company housing for workers.

Chall: What was his motive? I mean, he was the guilty one.

Swent: Yes. He just wanted the money, and he dreamed this up as a means of getting it.

Chall: He would have followed through? You had no way of knowing.

Swent: Well, I doubt it. It was probably an idle threat. But until you knew who it was and all that, you had to be careful.

Chall: Well, that was a bit of excitement.

VII LEAD, 1954-1957

Assistant to the Manager: Background and Reasons for Returning To Lead

Swent: On Lead, one of the first questions you had here was the reason for moving to Lead. I have to go back to the days when I worked there in 1946 and '47. The manager at that time was Guy Bjorge, and the assistant manager was Harlan Walker. The mine superintendent was Ed Ross.

His brother Alec had been mine superintendent before him and retired and then became mayor of Lead. But unfortunately, neither Alex nor Ed Ross were college graduates. They were practical men who had grown up in the mine, and they were very forceful men and very bright men. They had learned how things were done in Lead, but they did not have the vision or experience to know how things were done elsewhere. But they became very dominant and very positive in their attitudes as to how things should be done in Lead. Things worked well. They did a beautiful job of perfecting everything that was done in Lead. But they really resented and resisted change a great deal, because they didn't have that type of imagination.

Harlan Walker had been brought in, and he was a college graduate, as well as Guy Bjorge. Harlan Walker had been kind of brought in into the middle here, into the position between the mine superintendent and the general manager, and as a person who would be able to initiate some modern methods and changes in the Homestake Mine. Well, the mine superintendent didn't want this, and basically with his dominant personality he was able to freeze Harlan Walker out so that he really had very little that he was able to do there. He was in a very frustrating position.

Well, in 1953, Guy Bjorge retired as manager. It was obvious that they were not going to give the managership to Harlan Walker.

He did not have any friends in the community as a result of the embarrassing position that he had been in. He had gotten himself out on many limbs and just had no support in the community or in the staff. So it was obvious. He resigned and went to another job. And they brought in Abbott Shoemaker from the Triumph Mining Company in Idaho to be manager. He had been over there acting as a consultant on trying to get some new mining methods in. Ed Ross had also retired by now, and the new mine superintendent was Clarence Kravig, who was a geologist, but had been working in the mine operations for years and was a college graduate, although not in mining, but still had the education to be able to accommodate change.[1] And Ab Shoemaker had been coming in to try to devise new mining methods that were needed as the mine got deeper. Because the old mining methods really wouldn't--

Chall: Weren't producing?

Swent: Well, they would produce, but they were very dangerous as the mine got deeper. So there was a complete turnover there, and Ab needed an assistant. Now I had met Ab once when I went up on vacation, I think in 1953, just a few months after he had taken over as manager. I went up there on a vacation trip with the family, visiting the Herzes.

Chall: I see. I read that he had also been at San Luis. That wasn't when you were there? You didn't know him then? I think Mrs. Fielder in her book mentions that he had been at San Luis.

Swent: Well, Triumph Mining Company was managed by San Luis Mining Company from the San Francisco office. It had nothing to do with the operation in Mexico. It was another Hearst, Haggin, and Tevis business, and my dad had run that. He was the one who hired Ab Shoemaker. Ab Shoemaker had been in gold mines in the Philippines when World War II broke out. He had been taken prisoner by the Japanese and was a prisoner of war and was one of those who survived the prisoner-of-war camp. Then my dad hired him after the war to be manager at the Triumph Mine, which is the mine that I went up to in '41, to see the tunnelling operation. That puts all those things in perspective. I had met Ab just casually when he was visiting my dad in San Francisco once, just about the time he was being hired, I think.

Anyway, in Lead, after he had become manager and during my vacation up there, I called on him. I also asked for a trip through the mine, just as a refresher for me. I did that and afterwards we talked quite a little bit, particularly about a

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[1]Homestake Mine Workers, Lead, South Dakota, 1929-1993, interviews with Clarence Kravig, Wayne Harford, and Kenneth Kinghorn, Regional Oral History Office, University of California, Berkeley, 1995.

shaft-sinking operation that was going on. They were deepening one of the shafts. We had a long conversation. Nothing came of that. I wasn't looking for a job or anything; it was just professional interest. And I went back to Tayoltita and was working there.

But they were looking for someone who could serve as an assistant to Ab and yet who would be acceptable to the staff. Finally, somebody thought of me--I'm not sure who--and they decided, well, if they hired me, I was a known quantity. I had been there before. I knew most of these people and I could come in and not upset the apple cart too much. So that was the basis for him offering me the job. And the job offer came--I think Shoemaker suggested it to Dr. McLaughlin and Dr. McLaughlin sent word to me in Tayoltita that they would be interested in having me go to Lead as assistant to the manager. And that term was very carefully chosen. It was assistant to the manager, it was not assistant manager. It wouldn't upset people too much.

So then I went, made a trip out from Tayoltita to San Francisco to see Dr. McLaughlin and go into this and get down in more detail as to what sort of a job it was.

Chall: What was Dr. McLaughlin's position at that time?

Swent: He was president of Homestake at that time, and also a director of San Luis. San Luis and Homestake still had the same offices in San Francisco. They shared the office and shared the office help. The offices were essentially just financial offices. There was very little technical work done out of them.

So finally I decided I would accept. Some of the reasons why were that our children were getting to the age when they would need to go to school. With three children we thought probably the Calvert system would be very difficult for Lee to work, although she was acquainted with it. I think we did a little bit of it before we left, some kindergarten work. But it didn't look like it was too promising a road. We thought we would be better off--it was an opportunity to get back into the United States. Usually the transition for people working in Mexico back to the United States is a very difficult one. It's difficult to get a job of comparable stature. Generally you go from a job where you have lots of authority and lots of people working under you to a lesser job in the States without much authority and it's usually lesser pay.

But I figured it was a good opportunity, so I decided to take it. So we did. We left Tayoltita in May of 1954. They had a big farewell party for us the night before we left, and it was one of the kind of New Year's style parties. They had brought in a special band that featured a peg-leg dancer, a fellow that had a

wooden leg and was dancing. We went from the party home to close the suitcases and go over to the airport.

We flew to Mazatlan and down to Mexico City. We had decided we would take a little vacation between jobs. We spent a couple of days in Mexico City and drove around Cuernavaca and saw some of the sights there. Then we flew up to Houston.

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Then we went to New Orleans sightseeing.

Chall: You had your three children with you?

Swent: Yes, we had the children with us. We bought a car in New Orleans, a red 1954 Mercury station wagon. And we started driving up the Mississippi, took several days' drive. We finally got into Lead.

One little adventure that we had there--to show you the language business. The kids had no problem. They would speak English with the people in New Orleans and that sort of thing. But we got up to Vicksburg and we spent a night in a motel there. The next morning, while we were packing up the car, our older boy, Kim, wandered out. He was about four then. There were some trucks arriving and dumping dirt in a pile somewhere. I didn't pay any attention to this; I was packing the car. And all of a sudden we could hear Kim yelling and screaming and yelling and screaming about something. So I went over to see what it was. I asked him what the problem was and he said, well, this truck driver wouldn't answer him. I said, "What were you asking him?" "I was asking him why he was bringing this dirt." Well, when we sorted it out, what had happened was that the truck driver was black, and by Kim's standards he should speak Spanish. All his instincts told him that this fellow should speak Spanish, and he had asked him in Spanish. And it was an English-speaking black, and he didn't understand Spanish! [chuckles] So that was part of Kim's education right there.

Anyway, we got to Lead. We didn't have a place to live in at that time, so we moved in with the Herzes. They had extra rooms.

Chall: So both grandparents were still living at the time?

Swent: Yes, both of them were still there. In fact, Mr. Herz was still working, although he was very close to his retirement. I think he retired a few months after we arrived.

The first job that I had basically was just to get acquainted with the mine again. So I spent almost six weeks just going

underground every day with one foreman after the other, just going through the mine from the top right down to the bottom. The workings were spread out over a tremendous area, and eventually I got to know the mine pretty well.

Revising the Safety Rules Book

Swent: Then this next job that I was assigned to was to revise the safety rules book. There was a booklet that the company published on the safety rules that the company had. At that time there were no federal and state regulations on this, so the company book was it. And this was a major undertaking. I took the old book, which was pretty old--I don't know how many years old it was. But there were a lot of things that were no longer applicable to the new types of equipment. We had new equipment that needed new rules. It was a major job. I would write up what I thought were the proposed rules and then after I would have a chapter or so done I would go over it with the mine superintendent, Clarence Kravig, and his assistant Bill Campbell.

Once we had gone over these and revised them two or three times, then we had sessions with the mine foremen. We would give the proposed rules to the foremen and let them read them for a day or so ahead of time and then have a meeting with them and get their input to this. Finally we would come up with what we thought were the final rules.

I thought the book needed a little bit of livening up. The old one had too much, the print was too small. It was just page after page of this small type, rules, which made deadly reading. So I managed to locate a cartoonist down at the Black Hills Teachers College in Spearfish. I arranged with him to draw some cartoons. He wasn't the very best cartoonist in the world, but it was all right. We livened the pages up with a few cartoons, and then used somewhat larger type size and finally printed the new safety booklet.

Chall: How conscientious could you expect the mine people, the superintendent and the foremen--to be about these safety rules, if the only guidelines that you had for enforcement were in the company? Of course, they wouldn't want anything to happen to their workers. That would be enough of an incentive to follow, I suppose.

Swent: Yes. There was a safety bonus that was paid to supervisors, if they had no lost-time accidents during the month. So this, at that

time, was there to encourage them to see that the rules were obeyed. And Homestake had a safety director. But he was basically an employee of the mine superintendent. As I got into this safety work more and more, I came to realize that this wasn't really the best set-up in the world. The safety director should be in a higher level. But then the people that they used for safety director were generally older employees, shift bosses or foremen who wanted a less demanding job and who had enough qualifications that they could handle the safety job. There were a lot of things to keep track of, lots of statistics to be accumulated, accidents to be investigated. Of course, I worked with him very much on this rule revision. His name was Phil Graves, and he was the mayor of Lead at the time. A fine man; I had no problems with Phil. We got along very well.

I should say that this experience of writing the safety booklet and getting into the rules, and getting to know all the foremen and how they worked, and what their reactions were, and how they thought rules should be worded--this was all a very valuable experience. I don't know whether Ab had used this as a means of training me or whether it was just accidental, but as my career developed it turned out to be a very key thing. I learned a great deal that was to be of use later.

Chall: When you went to Grants?

Swent: Yes, when I went to Grants.

The Employee Handbook: Classifications and Fringe Benefits

Swent: Some other things occurred in Lead or that I was involved in also had some effect on my future work in Grants. I probably should mention them now. One of the projects that I worked on just before leaving Lead--and I worked on this with Don Howe, Donald P. Howe, the public relations director--was an employee handbook. This was to be a book showing the employee what his benefits were and what his rights were and explaining all the benefit programs and this sort of thing. We worked for quite a few months on this. My recollection is that it was published just shortly after I left.

Back of this was the fact that we were being pursued by unions every year. A union election had been held in 1955. That was the first full year I was there. Then another election was scheduled in 1957. It was held in March of '57. In each case the company put on an intensive campaign with the employees to have them vote "no union." It was a campaign primarily of letters, but also some

personal contact through supervisors. The campaign was generally headed up by Kenneth Kellar and helped by his partner, Robert Driscoll. A lot of it was executed by Donald Howe.

Chall: Going to people in the plant in supervisory positions and talking to them, or holding meetings?

Swent: No, there were no meetings. Well, there would be supervisory meetings, and it was very important, of course, to be sure that the supervisors didn't do anything that would cause an unfair labor practice charge. Basically the caution to supervisors was to not in any way dictate to employees how they should vote. They could tell them what the advantages of having no union were, but not say "You'd better vote no union or you'll lose your job," or anything. No threats or anything like this. Because that could immediately lead to an unfair labor practice charge.

Swent: Homestake actually had a very good set of fringe benefits. They were far superior in many ways to other mining companies' at the time. These were the things we wanted to put into the handbook.

We also developed a new wage scale in 1956. In the past we had a rather reduced set of job classifications. A man got into a certain job classification and it didn't change for years. The only time he got a raise was when there was a general wage increase. Very seldom did he move from one classification to another. Because of the union problems and the attempt to stay nonunion, I suggested that we develop a much more comprehensive wage classification with smaller increments, where a man could be moved along between general pay increases. He could move from one classification to another. The increments were much smaller than they had been before; we about doubled the number of job classifications.

Chall: That gave the person the feeling that he's moving on, moving ahead?

Swent: Yes. That was exactly the idea, to be able to give a man individually an occasional increase.

Chall: Was this based on length of service or merit or both?

Swent: Well, they were based entirely on merit, and the need to fill a particular job classification, if we needed it. In addition to the wages, we had a holiday program with a liberal number of holidays. I forget just how many we had at the time. The number keeps increasing; every year we'd add one. We had policies on minimum call-out time. If a man was called out for overtime he was guaranteed at least four hours of pay.

The biggest fringe benefit was the free medical care and hospital care. We had a staff of company doctors and ran a clinic and a company hospital. We had a program of paid vacations. We had shift differential pay. We had an underground differential. There were some people who worked both above ground and below ground, like maintenance people. When they went underground they received the underground differential. For those who worked underground all the time, of course, it was really part of their basic pay. And we had a pension plan which was completely paid for by Homestake. There was no deduction or contribution by the employees.

Special Machinery for Sinking Shafts

Swent: Another venture that I got into there was the shaft-sinking jumbo. When I first went there we were deepening the Yates shaft from the 4850 down to the 5,000-foot level, which wasn't very far. But still, 150 feet. I went to see this operation in the early days I was there. It looked like an ants' nest or something, with all these guys running around on the bottom of the shaft and drilling with hand-held drills, sort of like paving breakers--a little heavier though. But it's very difficult drilling that way. The steel would stick and they had to lift the drills on and off and fight the steel out. Loose fine rock would keep falling down in the holes and then jamming the drill steels. It was very difficult drilling.

It seemed to me that we could improve on that, so I began doing some research and talking with the equipment suppliers, principally Ingersoll-Rand, about building a jumbo for shaft sinking. After two or three months of talks of this sort they came up with some examples of how this was being done in coal mines--the sinking of shafts in coal mines in the Pennsylvania and West Virginia area. Clarence Kravig, who was mine superintendent, and Bill Campbell, who was his assistant, and I made a trip out to visit two or three sites in West Virginia and Pennsylvania where they were drilling shafts with these types of jumbos. They weren't strictly what we needed, but we finally managed to get Ingersoll-Rand to design one that would meet our needs. So we purchased it. It wasn't in time for the Yates shaft, but we did use it when we began sinking the Number 4 winze from the 4850 level on down.

Chall: What was the difference?

Swent: Oh, I forget the differences. It was made for heavier drills. The coal mine things were going through fairly soft sedimentary rocks.

Our rock was much harder and we had to have heavier drills and a different size, that sort of thing.

Roger Pierce, who had formerly worked for Ingersoll-Rand and whom I had known down in Tayoltita when he had worked for Ingersoll-Rand, went into the consulting business and into the used machinery business. He brought to our attention the early shaft-drilling machines that were being used in the coal-mining districts. But again, these were at that time applicable only to softer rocks. They weren't applicable to the Lead rocks until later years. We were able to use them both in Grants, where we had soft rock.

Studying Ventilating and Cooling Systems

Swent: The next job was a question of ventilation and cooling. The mine was 5,000 feet deep. The bottom level was 5,000 feet below the collar. And what happens in the earth is that the temperature of the rock at the surface generally is the mean year-round air temperature, which in Lead, South Dakota, was 44 degrees Fahrenheit. This means the rocks in the upper part of the mine near the surface were 44 degrees.

Chall: That's the mean temperature year-round?

Swent: That's the mean temperature in the air outside for the year. So the rock was that temperature. As you go deeper in the earth's crust rock gets warmer and warmer.

Chall: You were going down about a mile.

Swent: And the gradient in Lead had been pretty well established as being about a one-degree-Fahrenheit increase in temperature every 110 feet of depth.

Chall: Good gracious!

Swent: So down at the 5,000-foot level we had fairly high temperatures. The problem is that when the rock gets hot then it gives the heat off into the air that fills the workings. The air there tends to approximate the temperature of the rock unless you move it with ventilation and keep it cool. There were two major places in the world where this had been encountered. One was in the Mysore gold fields in India. They had gone down to a little over 10,000 feet in depth. And then the Witwatersrand area of South Africa. It is a gold mining area. They had gone down at that time to about

11,000 feet in depth. Both Mysore gold fields and South African mines had been using air conditioning for a number of years.

In the United States there were two mines that had had these problems. One was the Anaconda Mining Company that had what they called Mountain Con--I think that stood for Consolidated. But it was always called the Mountain Con Mine, in Butte. And the other one was the Superior Mine of Magma Mining Company in Superior, Arizona. Mountain Con was about 5,000 feet deep and the Superior Mine was 4,800 feet deep. But they had unusual gradients. And they had both gone into extensive air conditioning programs which I studied. I went over to Butte. I had also gone over there once on their safety program when I was doing the safety booklet. So I had several trips to Butte.

More on Mine Safety

Swent: And speaking of the safety trip--I was absolutely appalled. This was a very eye-opening experience. Anaconda had all sorts of articles in the literature and everything about their safety practices and safety performance. We got over there and it was just so different from what they said it was. There was absolutely no safety consciousness underground. Shift bosses weren't in the least bit aware of the need for enforcing the rules. In fact, they were afraid to enforce them. The men were in complete control. The men did what they wanted to. It was basically that the union business had just gone so far there that they were in command and you couldn't enforce the rules. Because if you tried to discipline the men, the union intervened and kept anything from happening and protected the men.

Chall: You mean, the union itself was not interested in the safety of their men?

Swent: Oh, they weren't. This is one of the big myths of American unionism. Until very recently-- I think the unions are now generally interested in safety. But for years when I worked in the mines, the unions were not interested. They gave it lip service, but if you ever tried to discipline anybody they would immediately intervene and protect him and make it just very difficult to try to enforce the rule. This was very obvious at Butte. It just wasn't working. The whole safety system was not working there.

Chall: They must have had a terrible accident rate.

Swent: Yes, I'm sure they did. But then I can't say too much for Homestake's at that time. During my first year there we had five fatalities, which is terrible. That's a terrible record for a mine that size.

Chall: Unavoidable?

Swent: Well, not necessarily. Some of them were absolute stupidity. One case involved a brand new worker. It was stupidity on his part, but also stupidity maybe on the part of the people training him, that they hadn't warned him. But he got curious and he came to a shaft on one of his first days at work, and he saw this gate there and he wondered what it was. He opened it and stuck his head into the shaft to look down and a cage came down and hit him on the head. Those are all avoidable. That type of accident is avoidable. Most of them were that type, and I never did really comprehend why we had that spate of them. Ab was just terribly upset. It was very difficult. He was new and he wasn't quite sure what was wrong, either. But he certainly let everybody know that he wanted the safety rules followed.

Chall: This was while you were writing your manual, or afterwards?

Swent: Part of it was during the time I was writing the new rules. No, it was a very poor record. But there was never any question there in Lead about whether the employees, the supervisors, were generally trying to enforce the rules, because they were. They did a very conscientious job of trying to enforce the rules. But they had limited capacities themselves. They weren't safety engineers. We had no professional safety engineer. Even the safety director was an ex-shift boss. We had no professional safety people at all. But then in Anaconda they had a professional safety man in Butte. So that's not always the complete answer.

Chall: I see. I guess a great deal of it depends on the persons involved, doesn't it, as it does with almost any management.

Swent: Well, I'd like to leave it there for today if you don't mind. We're near the end and I have to go to a luncheon date.

Chall: All right. That's close enough.

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Chall: Okay, we can start. Last week we were discussing matters of safety, cooling air methods, and that sort of thing.

Settling in the Glover House

Swent: Yes, I think we were into the mine temperature problems. But I remembered one thing in the meantime that we might as well put in here. I'll go back to the cooling later. That was a question of where we lived in Lead. As I mentioned earlier, we started out living with the Herzes, my mother- and father-in-law, who had a very large house and several spare bedrooms. Then, because there was nothing adequate in Lead, we looked around to see if there was anything we could buy. There were two or three houses for sale by people who were leaving or retiring, but nothing that was adequate for our family. At that time we had three children.

So finally Ab Shoemaker, the manager, decided that we would take one of the houses that Homestake owned. That was a house occupied by a man who was just retiring, Jack Johnson, and his family. It had been bought, back in the World War II days, to be used as a boarding house. But as times changed they didn't need it, so they had given it to Johnson, who was head of the construction department, to live in. He retired and left Lead, so it was available.

We decided it needed some changes to bring it up to date, and Ab agreed to have the work done by the company construction people. This was my first run-in with the Homestake method of estimating jobs and keeping costs on them. They estimated the improvements that we wanted, which were mainly an extra bathroom and a number of closets and lowering the ceiling, at $20,000. When they came to do the work--and I was down there almost every day watching the work and that sort of thing--it cost about twice that.

When I dug into it out of interest, just to see why (nobody seemed to care that it was costing a lot more than estimated), I found that the method used to estimate was: you estimate all direct costs, just whatever labor and materials would go into the job. That would be the cost estimate. When they actually did the job the accountants charged all sorts of other things against it--overhead, indirect costs, things that raised it up. So the estimate wasn't made the same way the accounting was done. This persisted for quite a few years before the system was changed and they tried to get more uniformity or conformance between estimates and actual costs.

Chall: Were you supposed to pay for that, or was it covered by the company?

Swent: No, that was a company expense.

The interesting part about the house, however, is that--this goes back to the days of Mary Baker Eddy, the founder of Christian Science. Before she got the church started and became famous, she had lived out west in Montana and married a man named Glover. They had a child, a boy. Then she left him and went back to Boston and eventually started the Christian Science church and became famous and wealthy. But she essentially abandoned the child, and it was raised by her mother- and father-in-law, the Glovers, who lived in Lead.

When she became wealthy I guess she decided that this was a piece of her past that she'd better atone for. So she arranged for a house to be built for him in Lead and she sent out the skilled workmen and all the materials from Boston. It was a brick house. All the brick was shipped out. It's known as the Glover house today. It was a very large brick house with two stories and a big basement. The basement wasn't floored; it was a dirt basement, dirt floor. That was one of the problems that we had to take care of when we wanted to move into it.

The Johnsons had just made no use of the basement at all because it seeped water and it was just mud. The water came in through the masonry walls that went down into the ground, and the water seeped in and just made mud of the floor. They had planks laid around to walk on, but it was unusable. Probably the biggest expense of all the remodeling was cutting off the seepage.

Chall: So you were in the Glover house?

Swent: We were in the Glover house. We would get all sorts of visitors. This was not any deep secret in the Christian Science church. There were a lot of people who knew about it, and there were people who would come by and want to see the house, because it had been ordered built by Mary Baker Eddy. She never came out there; she never even saw it.

Chall: What did her son do? I mean, as he grew up, did he stay in Lead?

Swent: Oh, the Glover family is still in Lead.

Chall: Did her son live in the house?

Swent: Yes, he lived there for a while. Eventually the Glover family sold it to the Homestake Mining Company just after World War II, when Homestake reopened. There were still Glovers in town, however, and George Glover still lived there. He was in his sixties, and illiterate. He had never been taught to read or write. He could sign his name and that was all.

Chall: Isn't that an interesting story. So he worked somewhere?

Swent: He was a cabinet maker. He did carpentry and cabinet making, and was quite good at it. I never knew him particularly. I knew who he was, but Lee and her dad, particularly her dad and mother, had known him and knew the family better than we did. Lee knew some of his children, who they were, and was in high school with some of the family.

At any rate, we lived in that house until I was transferred to New Mexico. It was about a year and a half, though, after we first went up there before the house became available. Between the fact that it was a while before Johnson retired and then the remodeling took an additional amount of time.

I should add that one of the pieces that was remodeled was the kitchen. That had to be updated.

Special Support to Mexican Teenagers

Swent: Still on the personal line, when we first got there we brought up two children from the Mexican community. We came in June and the school year began in September. We had two of the boys of the Cordova family from Tayoltita come and stay with us--Raul and Carlos Cordova, two brothers. They were a couple of years different in age. They came up and stayed with us and went to Lead High School for a year in an attempt to have them learn English. It worked fairly well. It was a little crowded in the house. Actually, they came and went before we ever moved into the Glover house.

The next year we had the son of Hector Escutia, Hector Jr. of Mazatlan, come and stay with us. He was with us most of the time in the Glover house. He was there with us the year that we lived in that house, before we went to New Mexico. In fact, he went to New Mexico with us and went home from Grants.

Chall: So he lived with you quite a few years?

Swent: No, it was just one year, one school year. We were only in Lead a total of three years and with the vacations and things, why, it wasn't very long.

Chall: It was rather a nice gesture on your part to bring these boys up to learn English. Have they made good careers for themselves?

Swent: Yes, Hector went on to the State Agricultural College in Brookings, South Dakota. He went there and studied agriculture, and then went back to Mexico. The following year, after we moved to New Mexico, Hector's younger brother Sergio--they called him Serge--came up. He stayed with the Herzes for a while, and then stayed with another family for a while and went to high school. He went to Brookings also. So the two of them were in Brookings more or less the same time, and both of them studied agriculture.

They went back and started applying their knowledge to a ranch that their father had bought south of Mazatlan. They introduced a number of practices there and did very well. They introduced the concept of silage. Nobody had ever done anything like that before. They built silos and developed silage. They also started to improve the cattle. They made it a practice to give calves to some of the neighboring ranchers so that they could improve their stock. They did a very good job on this, and eventually they've become very wealthy. They became agents for U.S. agricultural equipment in Mazatlan and for seed companies and a number of things like that. They went into a contracting business, doing street improvements in Mazatlan, gutters and sewers.

Chall: It shows what a little education and some entrepreneurship will do for a person.

Swent: Yes. Well, of course, they had a lot of push from their dad, too. Their dad was an exceptional man. Raul and Chato never did as well. Raul went back to Mexico and went to a technical school in Monterrey and became an accountant and has done fairly well as an auditor. Chato (Carlos) eventually had an accident in a car that turned over and cut off one of his arms. This has somewhat limited him, but has not hampered his spirit. Chato was always a very happy-go-lucky boy, and he developed into an adult the same way. Even though he has an artificial arm, he's just very happy-go-lucky. But he never went on to get a higher degree of any sort. High school was about as far as he went. He went back and worked for San Luis. I think he's still working for the Mexican San Luis Mining Company now.

Chall: It's gratifying to realize that you could help young people move ahead.

Ventilating and Cooling Systems (continued)

Swent: Well, we're back to the mine cooling problems. Did I explain about the gradient in the ground and the way the temperature in the rock increases with depth?

Chall: Yes, you did.

Swent: I don't remember now the exact temperatures, but the temperature at the 5,000-foot level, the virgin rock temperature--this is a hard figure to get, because as soon as you drive an opening into the ground, into the rock, it begins to cool off. To get virgin rock temperatures you have to drill deep holes into the ground, away from the surface that's being cooled, put thermometers in there for a long time and let them come to an equilibrium, and read them periodically. When it finally comes to a steady point, why, that's the rock temperature. But you have such factors as when you drill the hole, that creates heat in the hole.

As I remember, the rock temperature there was something over 100, maybe 108, 110. I'd have to look it up. The problem was that we wanted to develop the mine on down deeper, below the 5,000-foot level. We had to conceive a long-term plan for cooling the mine below the 5,000-foot level.

They were just beginning to sink what we called the number 4 winze, which was the first working below the 5,000-foot level. It was to be a vertical shaft from the 4850 level on down to the 5,900-foot level. It was a 900-foot increment below the 5,000. The reason they selected the 4850 was that that had been chosen as a major haulage level in the mine. They had put in, at that level, wider than normal track; they had put in 36-inch gauge track. Most of it in the mine was 18-inch gauge. It was very narrow. They decided that from the 4850 on down they would have a wider gauge of track. So they had put in a major haulage system on the 48, it was a trolley locomotive. This was all done and accomplished before I got there.

At the 4850 level, though, the ore bodies were plunging at a fairly flat plunge so that the deeper it went, the further you got away from the operating shafts, the Ross and Yates shafts. The 4850 level, from the Ross and Yates, was about 6,000 feet over to the point where they wanted to sink what we called the number 4 winze.

This was started, but they knew they had to come up with a long-term solution to the cooling problems. So one of the first things that I got into, after I got into my job there, was to

become educated on this whole problem, not only about the specific problem in Lead, but just how mine cooling is done. I did an awful lot of reading and subscribed to some of the South African journals.

The South African mines (and I think I mentioned the Mysore gold fields) had a lot of heat problems also. They were quite deep. The Mysore gold field is 10,000 and the South African mines were hitting close to 11,000 by then. I think they've passed 12,000 now. The approach in those countries had been to put in massive refrigeration plants at the surface, at the collars of the shafts, and to cool all the air that went into the mine down close to 33-34 degrees. Then let it go down into the mines through the ventilation system and hope that by the time it got to the workings it wouldn't be too hot.

This had certain limitations and the South Africans were beginning to feel them. The Mysore gold fields had felt them also, but they became uneconomic to operate anyway, and they eventually shut down. They didn't change their system. At the time that I was delving into all this the South Africans were beginning to realize that they would have to change the system because the air, by the time it got to the working places, had increased in temperature too much and was becoming less and less effective as they went deeper.

We decided that was not the system for us. We did a lot of casting around and, as I say, a lot of research. Eventually Ab Shoemaker engaged a friend of his who was the manager at the Superior Mine of Magma Copper Company in Superior, Arizona. This was a very hot mine. The company had the name Magma. The mine was called the Superior Mine. But they called it the Magma Company because the mine itself was in a dike, which was an intrusive rock. This had a higher than normal heat content. It had been intruded as an igneous rock and the copper mineralization was in the dike. The dike had a higher heat content than the rock surrounding it because it hadn't cooled off yet from the injection. It was several degrees hotter than the surrounding rocks. They were one of the pioneers of mine cooling, although the other pioneer in this in the United States was Anaconda Company of Butte.

The manager down there was a gentleman named Burch Foraker. He was a pre-World War II friend of Ab Shoemaker's. Ab engaged him as a consultant, to come up and spend some time in Lead, go through our problems, become acquainted with the mine and see what he recommended. I went along with him, almost every day while he was there. We had a very good visit. I learned a great deal from him. He invited us to go down to see their installation at Superior,

which we later did. Bill Campbell, Clarence Kravig, and I went down there and spent a week visiting.

They put a refrigeration plant at surface which cooled water, not air. Then they put a high pressure pipeline down the shaft and put in heat exchangers at the different levels where they wanted cold water. I think they had one on the 3,400 level. That was the beginning of their really hot country. Then they cooled the levels from there on down to the 4,800--their deepest level. Their rock temperature at the 4,800 was something like 120 degrees, which is hotter than ours at the 5,000.

They put this chilled water down through the high pressure pipe and then through these high pressure heat exchangers, which then cooled low-pressure water which circulated on the level. For instance, on the 3,400 level they would circulate the low-pressure water. This again was cold water which had exchanged heat with the high-pressure cold water that came down the shaft. Then it went back up the shaft and was recooled at the refrigeration plant. The low-pressure water was then pumped around on the level to various cooling installations where they cooled air. Then they would blow air with secondary fans from a cooling station to the working face.

Chall: It was a complicated system.

Swent: It was. These pipelines all had to be insulated because the air was hot in the mine, and if you didn't insulate the pipeline it would pick up heat from the return air. By the time it got to the cooling station it would be too warm to do its job.

Before this had been installed--and they continued to do it--they had always paid, oh, fifty cents an hour, I think it was, bonus for people working in the hot areas. They gave everybody, when they went to work in the morning, a cake of ice to take with them. You would see these fellows going down with a cube of ice, about a cubic foot of ice.

Chall: What did they do with that? Where did they put that?

Swent: It would all be wrapped up. They would just carry it along and use it to cool their hands on, just keep it in the working place to try to cool things off.

Humidity as a Factor

Swent: The big problem with all these cooling and heat problems in mines is humidity. The human body can stand fairly high dry temperatures. You can go well over 100 degrees. You can go up to 120, 130 degrees in dry heat, as long as the body can perspire and the perspiration can evaporate. But if the humidity rises to the point where the perspiration won't evaporate into the air, then the body has no more cooling capacity. The cooling function is lost. So this means that if the humidity in the air gets close to saturation at a body temperature of 98.6 degrees Fahrenheit, you're in danger. Just a few minutes of work when you don't perspire is enough to just completely upset the body. It can be fatal, in fact, if it goes far enough.

The biggest problem in the mines is humidity. We use water everywhere. We use water for settling dust, we use it to wash things down with, we use it to drill with, to control the dust caused by drilling. There's just moisture everywhere. So one of the things that you have to watch for is you have to start controlling the use of water when you start cooling. One of the objectives is to keep the air as dry as possible, because it has a lot of cooling power when it's dry. When it's wet and humidity is high it doesn't have the same cooling power. So this is one of the underlying principles that we had to contend with.

Another underlying principle is that if you take cold water and put it down through a pipe or in any way drop it vertically, as down a shaft--

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--for a significant distance, it rises in temperature. So if you drop it 4,000 feet down the shaft it rises several degrees in temperature. Magma at Superior had gotten around this. Also Anaconda at Butte at the Mountain Con Mine had gotten around this problem by putting the water into high-pressure pipelines and bringing it back up. When you do this, if you don't allow the water to go free at the bottom of its fall, then it doesn't lose its temperature. It doesn't rise. So there's a lot of virtue to keeping it in the high-pressure pipeline, putting it through a heat exchanger to let it cool the low-pressure water that you're going to use, and then bringing it back up and recool it. One of the problems in designing these cooling systems is avoiding the rise in temperature of water if you let it drop freely, unconfined.

Various Solutions Considered

Swent: Anyway, the final recommendation that Burch Foraker came up with for Lead was that we put in a new ventilation shaft from the surface that would come down into the mine near where we were sinking the number 4 winze. This meant roughly a 5,000-foot shaft from surface. Then bring fresh air in through that, circulate it through the new lower levels that we would be driving, and at the end of those levels have a series of exhaust raises that would come back up to the upper part of the mine. Then we would have to drive a long exhaust drift or tunnel across the mine to a shaft that we were using as an exhaust shaft, called the Oro Hondo shaft. That was being used as an exhaust shaft at the time. But its capacity was too small, and we would have to enlarge that shaft.

This would be several years of work. We figured it was at least five years. We did a number of calculations. There were some alternates. He suggested that as an alternate we put in refrigeration machines and try to do with the air that we had. The virtue of the new shaft was that the air would go straight down to the area where it was going to be used. It wouldn't have to go down the old shafts and go through a number of, and a long distance of workings before it got to its point of use--the problem with that being that it would rise in temperature as it went through all these workings.

Chall: Now you're talking about air and not water.

Swent: Yes, at this point I'm talking about air. We thought about this and we did some estimates on the cost of this air system versus putting in refrigeration machines and cooling the air going down the existing shafts. Eventually we opted and recommended to the board of directors the system I outlined of the new shaft and putting in the exhaust drifts and raises and enlarging the Oro Hondo shaft. It was a multimillion-dollar project. Another problem was we had to have something that we could use in the meantime to permit development of the 5,300, 5,600, and 5,900 levels, because this new system wouldn't be in operation until long after we had begun to develop those levels. So I was asked to design some sort of an interim system that we could get along with for about five years.

Swent's Interim Design Accepted and Installed

Swent: The idea that I finally came up with after a lot of soul-searching and research and reading and visits to other mines was to use surface water in the system. We had records of the temperature of surface waters in Lead. Homestake happened to have most of the water rights in the area and was the water supplier to the town of Lead and had good records on water temperatures. During the fall and winter and early spring most of the time the water was in the 30 degree range, 39-40 degrees. In the summertime at the peak, in July and August, it might rise to around 50 or 51 degrees. So it was cold water. We used the 51 degrees; we designed around 51 degrees, which was the maximum in the summertime. That's when the heat load would be the greatest.

The concept was to take this water down the Yates shaft. We allowed it to free fall. We used a lot of water in the mine, as I say, for drilling water, drinking water, spraying water, controlling dust, backfilling with mill tailings, everything. The mine itself did not make much water. We had a tremendous pumping system to pump all this water out that we put into the mine.

So that the pressure wouldn't get excessive we had a system of tanks going down both the Ross and the Yates shafts, where the water would go from level to level. The levels were 150 feet apart and we would let the water flow two levels at a time and then put it in a tank and break the pressure. Then it would flow on down the pipeline to 300 feet further down and so on. There were float valves at the end of these pipelines at each tank so that they wouldn't overflow, because the water just flowed in as it was needed.

We decided to let the water flow through this system down to the 1850 level. And then at the 1850 level we would start a direct pipeline going down to the 4850 level. At the 4850 level we designed our own heat exchanger because the types of heat exchanger that Magma had used were just exorbitant in cost by this time. They had managed to get theirs right after World War II and the cost wasn't as great, but by now they were just out of sight. And for a temporary system we just couldn't afford it.

So we designed our own. I did a lot of research on this and got into the oil company business. The oil companies have a lot of cooling problems with petroleum and they had designed double pipe heat exchangers and you could buy those also. But again, they were very expensive. So I got the formulas and equations that they used to calculate the cooling power and with the help of a mechanical engineer, Roger Madsen, who lived just a couple of doors from us,

(from the Herzes, that is) we designed a double pipe heat exchanger, just hundreds of feet of double pipe at the 4850 level. Then the high-pressure water came down, went through the inner pipe, which was a high-pressure pipe of the double pipe heat exchanger, and then went back up to the 2350 level. At the 2350 level we took an abandoned cross cut and dammed it off and let the water flow into there. That served as a reservoir. Then from there it fed back into the mine, through the old system of tanks down through the shaft. It was then used as the regular mine water.

Then the low-pressure water we pumped on the 4850 level 6,000 feet out to the number 4 winze area. There we had an air cooler which was a four-stage air spray, counter current flow. The air went through these four stages in one direction and the cold water went through in the other direction, in stages, against the flow of the air. So that the coldest water hit the air in the final stage. The water would be sprayed into the air in the fourth chamber--the air was just flowing through--and the water would fall to the bottom of the chamber. It had a little pump that would pick it up and pump it through sprays into the third chamber. Of course, the water was picking up temperature and the air was cooling down. In the third chamber the water was picked up again and pumped to the second chamber, and the second chamber to the first chamber. The air would come in--oh, I don't remember the temperatures now, but fairly close to 80-90 degrees Fahrenheit. And we would cool it off down to a temperature that was very close to the water temperature. This was the virtue of the four stages.

This was an unusual design. I was helped on the design of that by a man at Butte who did this on his own outside of his working hours, a man named Williams who was quite conversant with air coolers. He did the fans for this. The idea was to get a very close approach between the entering water temperature and the final air temperature. We would get air out of there somewhere in the 60-70 degree range. Then we had to get it down the number 4 winze to the 5300 and the 5600 levels before it increased in temperature. We had calculated that if we did this through ordinary vent bags that the heat exchange through the rubber or through metal tubing would be too great and by the time the air got to the working places on the lower drifts that it would be already heated up.

I located some redwood stave pipes. There was, I think, a Federal Mining Company that had a project in Idaho that had ordered a batch of this pipe. (It was to be a water project.) This was a pipeline to conduct water, but it was 30-inch diameter pipe made of wood. Wood is an excellent insulator, actually. We decided to buy this pipe from them. This would serve, in essence, as a vent tube. We would pipe the air through this wood stave pipe down number 4

winze to the beginning of each of the levels off the winze. From there we could afford the temperature rise that would come from normal vent tubing. So that's what we did. We bought this wood stave pipe and installed it. It worked very well.

One other gimmick that we used--we had to insulate the long 6,000-foot pipeline from the Yates shaft heat exchanger, over to the number 4 winze. We had to insulate the pipeline. Otherwise the hot air in the drift would warm the water up and by the time it got out to the cooler it wouldn't be effective. How to insulate this pipeline was quite a problem. Magma had done a lot of insulating of cold water lines and the insulating materials that were available at that time were not very good. They were effective but they were hard to maintain in a mine atmosphere.

The Anaconda people suggested just building a wooden box around the pipeline. They said they had done this, and they gave me some sketches of what they had done in the Mountain Con Mine. So we designed a box. Every ten feet or so we would put a wooden ring around the pipe that was a rectangle on the outside but had a circle through it or a hole through it, and then nail planks on it on all four sides. We did all 6,000 feet of it this way, and we only got about a one-degree temperature rise in the 6,000 feet, which was really amazing. It worked amazingly well. The whole system was designed for about a five-year use.

Cost Analysis and Safety Factors

Swent: When we got it all figured out--what we wanted to do--we started doing cost estimates on it. I had sort of made my own back-of-the-envelope estimates, but I put it up to the mechanical engineering department to make a formal estimate. When it came back it was outrageous. It was many times what I had estimated. At first I couldn't figure out what in the world--

Chall: Was that the bookkeeping system?

Swent: No, this was not the bookkeeping system. This was a real cost. I couldn't figure out at first what it was. When I finally broke it down and got into it I found out that the cost was in the high-pressure pipeline that was to go down the Yates shaft. They had come up with the very expensive, very heavy duty pipe. I said, "What in the world do you need that heavy a pipe for?" Well, they were using a safety factor of four-to-one. I had not figured that you would need that heavy duty a pipe. I knew you would need high pressure pipe, but I didn't think you needed that one. I had used

a safety factor of two. They said, "Well, we've got to have things safe around here and that's a good safety factor."

This raised the cost from about $125,000 to $500,000. I did some research on safety factors. I went to the American Water Works Association literature and checked the safety factors that had been used at the Magma installation and at the Mountain Con Mine in Butte; they had used two-to-one. But the head of the mechanical department, a fellow named Leroy Seyhers, just wouldn't budge on that. So I took the problem to Ab Shoemaker and I went over it all with him. He came down on my side and said, "We'll build it with a two-to-one factor." So Leroy designed it that way; they redesigned it and it came out much closer to my original estimates.

Chall: It seems that to design this whole project you were working with other people in other mines and more or less doing it as, I guess, some engineers would say, through "seat-of-your-pants" engineering. Nobody really had the final solution because the problems were so different from mine to mine and level to level. So, you really were just working it out--you were designing it, in a way, as you went along.

Swent: Yes. It was what you might call a tailor-made design. We had to design it for our own set of circumstances. They are different from mine to mine--your geography, your layout, your vertical and horizontal distances, the heat exchange factors, that is the rate at which the rock gives off its heat, all vary. I remember one of the things, for instance, as a factor was what we call scaling. Water tends to scale up pipe, make deposits in pipe. I was afraid that in time the pipe, particularly in the heat exchanger, would scale up and that would reduce its efficiency in transferring heat, because this is very common. The oil field people had mentioned this, that you had to be careful of scaling.

Water Scaling

Swent: So we had to do a little research on how our water scaled pipes in the mine. I designed a test. I figured what the flow of water should be through a given length of pipe that was several hundred feet. You had to have a long distance of pipe in order to get accurate figures. We figured out what the friction loss should be if the pipe were clean. We chose a long length that had been in service for a number of years and then set up to measure the pressure at the beginning of the run and at the end of the run and ran it for several hours. We flooded the drift, of course. We

just opened the two-inch pipe wide open and ran it for several hours in order to get good readings. We did it on a weekend in order not to interfere with the regular operations because we knew we were going to flood the area.

We found that the cold water really didn't scale. As long as it was cold it didn't scale up. The friction loss in the pipe was the normal friction loss. There was no additional loss due to scaling. So then we went ahead and designed the system and assumed that we would have no scaling. We had our fingers crossed on this one. In the long run it worked out all right; there was no scaling.

Chall: Even in the long run? I would think that there would be scaling over time, especially if you had hard water.

Swent: Yes, it was hard water. But it was cold enough that it didn't do any scaling. If it got warmer there would be. We had tremendous scaling problems in other sections of the mine where the water was warm. But it was the temperature that kept it from scaling.

Chall: Just offhand, what do you do about that? Do you have to run some kind of chemical through it, or just get in there with scrubbers of some kind, or just change the pipe?

Swent: In lots of applications--it's a question of cost. You can run chemicals through. You can shut the pipe off, just turn your water off, run some chemicals through and try to clean it out and then put the water back in. But this is a tremendous undertaking in the mine. You couldn't really do this. It would be impractical because you need the water all the time. The amount of chemicals you would use would be tremendous.

Compressors have two stages of compressing air. They have a high-pressure cylinder and a low-pressure cylinder. When you compress air it heats up. When the air flows from a low-pressure cylinder to the high-pressure cylinder it goes through a series of pipes, a bundle of pipes, parallel pipes. Those are called an intercooler. They're in essence a heat exchanger. You run water through the pipes and the air flows around the pipes and the water takes the heat out of the air before it goes into the high-pressure cylinder. These scale up; they always scale up.

In any compressor installation periodically you have to take that intercooler apart and clean those pipes out. They have regular brushes that you can run through them and clean them out, or reamers if you have to. It depends on how hard the deposits get to be. So there are devices to do this, but it's expensive. Lots

of time scale will just plain defeat you and you can't do what you want to do if there's too much scaling.

Chall: You have to do something about it, is that right?

Swent: Sometimes the cost of what you have to do is just defeating. That's not economical to do it and you don't do what you want to do. Scaling is quite a problem in chemical plants, metallurgical plants. We had scaling problems in New Mexico that I'll come to later.

Sometimes you just can't do the things you'd like to do because of scaling.

Chall: What does that mean, though, in terms of the work that has to be done?

Swent: Well, you find another way of doing it! [chuckles]

Chall: Do you run a parallel system?

Swent: No. It just depends on your specific--the solutions are specific, of course. Sometimes you just plain can't do what you would normally do, then you have to redesign and do something else to accomplish what you want to do in some other way.

Chall: Never a dull moment. Was this all a challenge to you?

Humidity: Studied and Experienced

Swent: Oh yes, it certainly was. I had never had anything to do with this cooling business and I learned a tremendous amount. The first thing you start learning is the effects of humidity. There is a system for judging humidity. There are two temperatures that you can take of air. You take a dry-bulb temperature and a wet-bulb temperature. This refers to two thermometers that are mounted together, close to each other.

On one you tie a little piece of gauze on the mercury bulb and you wet this. Then you swing the thermometer around in the air in a circle. They're usually mounted with a handle that enables you to do this. The other thermometer doesn't have anything on the bulb. That's called the dry-bulb thermometer and the one with the gauze on it is called the wet-bulb thermometer. You could twirl it a minute or two in the air and then read them, and you'll get a difference in temperature. The one with the gauze and moisture on

it will be lower by a certain amount, depending upon the humidity in the air, because as you swing it the moisture evaporates off the gauze, and this lowers its temperature and lowers the temperature that the thermometer records. The drier the air is, the faster the gauze will dry out and the lower its temperature will be.

So the lower your wet-bulb temperature is relative to the dry-bulb temperature, the drier the air is. We just were doing wet-bulb readings all over the place. That type of thermometer is called a sling psychrometer. You have to keep the wet-bulb temperature--for men to be able to do work comfortably, you have to keep that temperature no higher than 80 or 85 degrees Fahrenheit. If the wet-bulb temperature gets into the nineties, you're in real trouble.

I had a terrible experience walking out of the 3400-foot level in the Superior Mine at Magma, in Arizona, when we were down there. On the 3400-foot level they had a very long level there, and the men are transported out in a train to their work point, and they work there. They have cold air being blown in through a vent tube from a cooling station. They were driving this long exploration drift, and of course they were getting further and further away from the cooling station.

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We were there as visitors. We didn't have the availability of the train because we went in after the men went to work. So we had to walk out to the face. The cold air was going through a vent tube. After it was used in the face it came back through the open part of the drift and gradually picked up heat. As we went towards the face it was getting cooler, and that was fine. As we walked out there things were getting better. But when we walked back, away from the face, the air was getting warmer as we walked with it. It was getting warmer and warmer. It was up in the high nineties, well over 95 degrees wet-bulb in this drift. We were walking out of there and I just got in very bad shape. We had to sit down two or three times and rest.

Finally we came to the cooler where the cold water was being used to cool the air. Now the cold water was in closed circuit. It wasn't being discharged. It would go back to the heat exchanger to be recooled. But the air being cooled was so humid that it condensed a lot of moisture out of it, and this moisture was just a regular shower. It was fairly cool, and this cooling station was big enough that it had a door in it. You could open the door and look in and you could see this big shower of condensate coming down. So when we got to that I opened the door and stepped in and

took a shower, a cold shower to revive, just in my clothes and everything!

Chall: I suppose that if things got bad the men would probably be letting the surface know that something was going on down below.

Swent: Yes, well, if anything had happened to us, I don't know. It might have been a long time before anybody found us. A few hours anyway. But it worked out all right.

Chall: It showed you the problem--that encounter.

Swent: Yes. An interesting sort of byproduct of all the research and reading and education that I did for myself--I read a lot of the South African journals. I even subscribed to the South African Ventilation Society journal and several of these foreign publications to keep up to date on cooling developments and ventilation developments. I read a very interesting article one day about fans and the effect of moisture in shafts.

We had a big exhaust fan. It was a 700-horsepower fan at the top of the Oro Hondo shaft exhausting the air from there. One day this 700-horsepower motor stalled. Nobody knew why it stalled. I heard about it and I discussed this with the mine foreman, a fellow named John Broome that I liked very much. He said, "Well, we don't know why it stalled." I said, "Well, you've got water in the shaft." "No, no, no, there's no water in the shaft." I said, "Well..." They started it up again and it stalled again the next day. I told John, "You go look and see if you haven't gotten some water in the shaft there." "Well, there's no water in that shaft. It hasn't changed a bit. It's just what is normally there." But he had enough confidence in me that he went and looked. Sure enough, he found that, in one of the workings they were driving there that somebody had changed the drainage out of that and had opened up the way for the water to drain into the Oro Hondo shaft. Once they plugged that they had no more stalling.

Chall: Is that something that you had come across while you were reading the journals?

Raising the Grizzly Gulch Shaft

Swent: Yes. I had just happened to have read it the week before, how it would cause fans to stall that way.

The long-term project went on for several years. Actually it wasn't completed until after I had left Lead. But I was there while we did the initial planning and got it started. We decided to raise this Grizzly Gulch shaft, as we called it, number 5 shaft. We were going to drive it in increments from underground. There were several levels that we could drive to the point where the shaft would be, and then we could actually raise from underground. It's much easier to drive a hole upwards than down, because you can use gravity to let the broken rock get out. When you sink, every pound of rock has to be manhandled and gotten out upwards, against gravity. You don't get it into mechanical conveyances anywhere near as easily.

So we decided there were several levels that we could drive out to the Grizzly number 5 shaft location. We had had experience where we could drive raises about 900 feet at a time, and that was as far as you could drive one. That became the economic limit. So we decided we would drive several 900-foot shafts or raises and connect them. They would be small bore, not the ultimate size of the shaft. I can't remember the size of the shaft now. It was something like a 12-foot diameter shaft, but I'm not sure. The ultimate design was circular and it was concrete lined in places. It wasn't all concrete lined at first, but it was, eventually. It was lined up near the surface because of cracked rock. That would leave about 1,100 feet that we had to sink, instead of the 5,000 feet. Sinking a 5,000-foot shaft would have been a tremendously long job for us.

One of the problems that we had, we had to provide a hoist for it. At one time there were two hoists left on the Ellison shaft which had had a big fire in the 1930s, and it destroyed the head frame. The shaft was never really reactivated. The two hoists were idle there. One of them we sold to Bethlehem Steel for a mine out in Pennsylvania, an iron ore mine called the Grace Mine. The other one was still left in Lead. We thought we could use this. It was up to the mechanical engineering department to do the calculations of whether it was adequate for the depth, whether it had enough wire rope capacity and strength and all this sort of thing. Roy Seyhers, the same guy that wanted the four-to-one safety factor, came up with a decision that we had to buy a new hoist. He got it all priced and everything. It was $250,000 for a new Nordberg hoist. He said that the rope diameter that the old Ellison hoist was built for wasn't big enough. We needed a slightly larger cable size.

At first I took this as correct; I figured he knew his business. Then one day our electrical engineer, a very practical elderly gentleman that I really thought a great deal of, named Cedric Gust, came into my office and started talking about this.

He said, "Why in the world are you letting them buy a new hoist?" He said, "You don't need it." He went through all the calculations with me. We sat there for a couple of hours and went through the calculations and sure enough, it wasn't necessary. The wire rope size on the Ellison hoist would do the job with adequate safety factor. For wire ropes you use a much higher safety factor than you do on pipes. There you need to have about a seven-to-one safety factor.

So I got into it with Roy, to find out why he decided we needed a new hoist. Well, when we finally boiled it down, it turned out that--of course, Homestake carries a very large inventory of wire ropes. The big hoists had one-and-seven-eighths-inch cable on them and one-and-five-eighths-inch. That's two sizes. We had a smaller size on the man cage than on the ore-hoisting hoist. Then we had another size on the number 4 winze hoist. We carried lots of sizes for slushers and things.

The Ellison shaft hoist had--I forget the size now, but it was slightly different than any other size. The reason he wanted to go to a new hoist was he didn't want to stock a new size of cable. He wanted to have one that would use the same size as another one. So that was his reason for wanting to spend $250,000 for a new hoist. We nixed that one also, and we made do with the Ellison hoist which is still in service. Now that was 1956 or so, and this is 1987. The hoist is still in service there and has accomplished the job.

Chall: Did you once again have to go to Mr. Shoemaker to--?

Swent: Yes.

Chall: Did that create problems, personal, or personnel problems within the group when you had to go to him?

Swent: I never really had serious personal problems with Roy Seyhers. Roy was a very agreeable guy and he would take orders. His judgment just wasn't--he didn't have great vision, that was all. But he never held any grudges and we got along fine. We tried to handle it all fairly diplomatically.

The Ore Tax

Swent: I guess that's about--well, let me just see. [looking at list of topics] One other project--let me go back a little ways. One of the things that I really learned very quickly after getting to Lead, of course, was the gold situation and the fact that Homestake

was facing a very critical problem in the price of gold. The price of gold was fixed by the U.S. government at $35 an ounce. And the costs in Lead were rising as they got deeper, as wages went up, and the cost of materials due to the inflation that was going on after the war. So their cost per ounce was gradually climbing. They were really getting desperate as to technical things to do to try to improve productivity and keep costs from rising too much. It was just a constant battle.

One of the things was to try to impress on the public, particularly the South Dakota public and the South Dakota legislature, that Homestake could not be the big taxpayer in the state if it was to survive. Homestake was by far the biggest venture in those days in the state and was just looked on as a source of income for all sorts of projects. The legislature had what they called an ore tax which was passed in the state.

The legal method to keep it from being a discriminatory tax (just aimed at one company) was that they passed a tax on mining based on the value of the product produced, based on the tonnage of an operation. The first 100,000 tons in a calendar year were exempt from the tax. Everything over 100,000 tons that year was taxable.

Homestake was the only mining venture in the state that mined anywhere near 100,000 tons. We mined about a million-and-a-half tons a year. By passing the exemption for 100,000 tons-per-year all the small miners were exempt from this. There were a lot of small mines in the Black Hills. And Homestake was the only one paying this tax. It was 4 percent of the gross. It was a severance tax, but they never called it that in South Dakota. They called it "the ore tax."

Producing the Movie about the Homestake Mine

Swent: In order to combat this we decided to produce a movie, a thirty-minute movie that could be shown on television in a half-hour spot. It was actually to be twenty-seven minutes, to allow time for the commercials. Also it was to be shown around the state by our public relations director, Don Howe. We had had a previous movie that was done in 1936. It was black and white, and it was not made with the same purpose in mind. It was a movie to show how the mining and milling were done. We decided we would do the same thing, but do it in color, and put in a short section that would bring up the economics.

We engaged a firm after a lot of research--Don Howe did a lot of work on this. We finally engaged a firm called Forney Films from Fort Collins, Colorado. Max Howe was the person that was running it; no relation to Don Howe. I was assigned by Ab Shoemaker to follow this project and work on it with Don Howe.

The first thing we had to do was produce a script. We looked at an awful lot of movies by other companies, including some very good ones by International Nickel. Of course we looked at our own old movie. Then we came up with a script. This was to have what we call voiceover, somebody narrating. Nobody in the film was talking. Everything that we shot would be silent, but there would be a sound strip on it with a narrator.

Then we began the shooting. This was a real experience. The amount of lighting that we had to have, of course, was tremendous. It was all electrical and we made ourselves a little cart that we could put a special transformer on and cart it around the mine, because this was more electricity than we had in most working places. We went around and did all the shooting there. It was very, very interesting. We had all sorts of problems with the lenses on the cameras because they became foggy due to the moisture and the humidity in the mine. They would be fogging. Max Howe was just tearing out what little hair he had. But he was very patient and did a good job.

When we got into the editing phase, this was done back down in Fort Collins. There was one section of it that called for some animation, to try to explain a mining method. I had the concepts and I tried to explain them. Max hired an artist to do the animation. He just didn't get the concept of the mining and what we were trying to do. He couldn't really understand it very well. He got very nervous.

I went down to Fort Collins several times and stayed several days, trying to help them out and trying to, I thought, speed it up. Rather than going back and forth to see what they were doing and redoing, if I was dissatisfied, I thought if I stayed there for a few days that maybe we could work it out.

Max finally told me that this artist was just too nervous, that my being there made him awfully nervous. He said, "Why don't you go away and come back." So I did this a couple of times. But he didn't make very good progress, and I was not satisfied with the animation work. It was getting much more expensive than Max had allowed for, a whole bunch of things.

Finally one weekend when I was gone he just hauled off and shot it. When I got back he said, "Well, we've shot it already;

that's done." Of course, they didn't have the film developed so I couldn't see how it was. When they finally did have it, I was disappointed in it. But as the contractor, Max said, "Well, that's it. We just can't afford any more animation." So that part of the film I thought was a little weak. The animation was too fast, was the problem.

The movie was produced and we finished it up in 1956. We had a premiere that fall, I think, in the lodge out in Spearfish Canyon. We had all the Homestake staff there to see it if they wanted to come.

Don Howe, then, began a campaign of going around the state, showing it at any occasion he could get, at schools, to the Rotary, Optimists, Kiwanis clubs, what have you. Any sort of group that wanted a program, he would show it and then answer questions afterwards. He always went around. He had a handbook that he had prepared on his own with all kinds of facts and figures about Homestake. A few times he had conflicts with other events, so I would take over the job of showing the movie. I did it two or three times. It was an interesting experience and I learned a lot about public relations there in that particular work with Don Howe.

The Effect of the Movie on the Taxes

Chall: What effect did this have on the legislation?

Swent: They got a reduction in time. I think it was after I left. I began going to New Mexico in January of '57, so I think in '57 they did get some reduction in the tax. This is a perennial battle. Every legislature, every two years, it's a new battle. Over the years that tax has gone up and down depending on the Homestake fortunes. But they push it just as much as they can.

The logic of severance taxes, the logic that the taxing authorities use is that you're using a natural resource that basically belongs to the state. You should pay a portion of it to the state in taxation. The mining people say, "Well, the state never put that mineral there. That's a natural occurrence. And taxing it as state property is really not valid." This is a perennial argument that goes on year after year in all the states that have mining in them. As you'll hear, we got into the same thing in New Mexico.

Chall: Yes, and the oil people have the same--.

Swent: Right.

Chall: Well, does that take us into the next phase of your career?

Swent: Yes, well, the uranium business--I got into that a little bit gradually.

Homestake Mining Company directors meeting at Grants-Ambrosia Lake, circa 1958. Left side, top to bottom: Jim Salisbury, director; Ira Joralemon, director; Bob Mulvaney, director; Donald McLaughlin, chairman; Donald Delicate, mine superintendent. Right side, top to bottom: John Gustafson, president; Bill Murray, director; John Hamilton, director; Guy Bjorge, director; Jack Jones, mill superintendent; Langan Swent, general manager.

VIII GRANTS, NEW MEXICO, 1957-1966

Part A Homestake Moves to Grants

Homestake's Decision to Produce Uranium

Swent: When I first went to Lead in '54 Homestake was already--in fact, Homestake made the decision to diversify in 1952 because of their problem with the price of gold. They did make a decision at the board level to diversify and go into other mining projects than just the gold mine in Lead. Because if they didn't, they thought they might eventually be forced out of business.

Their first ventures were in the uranium business. They did a little bit of uranium mining. They found some small open-pit ores in the edges of the Black Hills, particularly one over in Wyoming called the Carlyle Pit. That was mined out by the time I got there. Then they acquired a little property down in Moab. There had been a big discovery of uranium in the Moab area--the big discovery that sort of gave impetus to the uranium business. It was made by Charlie Steen at what he called the Mi Vida Mine in the Moab district of Utah. Eventually Homestake managed to lease a set of claims in the Moab area called the Little Beaver claims. At that time it wasn't a mine.

Just about the time that I arrived in Lead in 1954 Ab had sent one of the mine foremen, a fellow named Don Delicate, whom I had known--he went through the same training program that I did, just after I left in 1947--sent him down to Moab to start up the Little Beaver Mine. There was another gold mining company in the district there in Lead, very close to Lead, a place called the Bald Mountain Mining Company. It was a 200-300-tons-a-day operation, a completely different type of ore from Homestake's. The manager there was Richard Stoehr. Ab hired him to go down and work with Don Delicate in getting this Little Beaver Mine started.

After that they acquired at least another set of claims called the La Sal, which were fairly close to the Little Beaver claims. That one was to be also developed. The Little Beaver was developed by an adit, a long adit, several hundred feet long.

Chall: A long what?

Swent: An adit. This is a horizontal tunnel. But it's not a tunnel. It doesn't come out the other side of the mountain. It's just a one-open-ended tunnel that goes into the mountain. Tunnel normally means that you go through, with two open ends, and an adit is when it has just one open end. The La Sal Mine was to be developed with a vertical shaft. They hired a firm called Centennial Development Company, headed by two fellows named Harry Spencer and James Quigley, who contracted to do these two workings and get the mines started. Then after the shaft was sunk and the adit was finished, Homestake would take over and use its own work force and do the mining.

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Ab Shoemaker made occasional trips down there to see how the work was coming. After a while he began feeding me some of the economic problems to work on, particularly the economics of selling uranium ore versus milling it yourself. The sale of uranium ore was basically governed by a circular that had been published by the Atomic Energy Commission (usually called the AEC) called Circular 5, which had a price schedule in it of ore at different grades, with incentives, of course, for higher-grade ore.

This was a buying schedule that the government had established. They said they would buy ore at their buying stations. They had established a set of buying stations in the various uranium districts of the country where they would buy ore at these rates. Then, when the AEC contracted for a mill, they required the person or the entity building the mill to agree to buy ore from producers at the Circular 5 prices, as well as milling their own ores. This way eventually the AEC hoped to get out of the ore-buying business, and eventually they did. They got out of the ore-buying business entirely and turned it over to private industry that way.

Ab started giving me some of these economic problems of what was the best grade of ore and how much to ship and how much expense you were entitled to go to, to increase the grade of ore. There are some economics of this, so I learned Circular 5 very well. That was my first brush with the uranium business.

After a while of that Ab began taking me down to Moab with him when he went on these trips. Eventually, in 1955, we acquired another property there called the North Alice property, another set of claims. This one was to be developed with an incline shaft.

Chall: This was all in Utah, too?

Swent: Yes, this was to be run from the same operation by Don Delicate. They had established an office at the La Sal Mine, and that was the headquarters. These mines are all within two or three miles of each other, quite close.

So I went down in October of '55. They were beginning to try to design the incline shaft, the hoisting facilities, this sort of thing. So Ab sent me down to help Don Delicate on this. Don didn't have enough staff and time to do this. Either he had to farm it out to a contractor or we would do it. So I went down and did it. I spent a couple of weeks there and sketched out the design for the hoisting system and the dumping system, how we would dump the cars from the incline shaft. It was just a sketch design, it didn't have a great deal of detail. But enough that he could then contract for the various elements, contract for the hoist, and contract for the hoist house and contract for the dumping facilities, and that sort of thing. He also engaged Centennial Development again to sink the incline shaft.

I finished that job in October of '55 and then we went on vacation. Actually I was in Moab and I took a bus down to Carlsbad. Lee had driven down from Lead with the children. I met her at Carlsbad, New Mexico, and then from there we went on down to Mexico. We took a long trip into Mexico, went all the way down, almost to the Guatemalan border, and back up the West Coast. We visited Tayoltita and then came back up through Nogales in November and gradually back to Lead.

Chall: What did you do with your children?

Swent: We took two of them along. We left the third one with the Herzes. Richard was still only about two years old, so we left him with the Herzes. They took care of him while we were gone. We took the daughter of a friend of ours, a teenage girl named Rosalie Cone, with us as sort of a babysitter for the other two.

Chall: None of them were in school yet, so you could stay through November?

Swent: Yes, right. Rosalie took time out from high school in order to get the trip to Mexico. She was a very nice girl. We have been friends with the Cones to this day.

Then, when I got back, I still went occasionally to Moab with Ab to see the progress in the mines there, what was going on, some of the mining problems, things of that nature. Then, late in '56, Dick Stoehr and Don had a major disagreement on how to mine the La Sal Mine. Dick wanted to do all the development in the ore horizon. Don Delicate wanted to put in haulage under the ore horizon and then raise up into the ore and do work in the ore, but do the haulage beneath the ore.

Eventually Ab had to get into this one and settle it, and he settled it in Don Delicate's way. I didn't know Dick at that time, but Ab told me that he had not taken this decision very well. He was constantly bickering with Don Delicate over it. So they moved him out of working at the mines there and put him into exploration work. He began working with Paul Henshaw out of San Francisco.

Establishing the Mining/Milling Partnership in New Mexico

Swent: Paul Henshaw was the exploration geologist for Homestake in San Francisco and was trying to get more uranium properties.[1] There was a new find down in New Mexico in what's called the Ambrosia Lake area. In late 1956 Dick and Paul were trying to find areas that we could lease. It was Paul's concept that Homestake shouldn't really try to go out and do raw exploration and find properties, find ore themselves, but rather that, after ore had been discovered by someone, we should lease the property or buy it and not take the risks of raw exploration, because those risks are very large.

Chall: The cost of them?

Swent: They're costly and then the chances of success are small. You can go through hundreds of properties sometimes before you find the one that can be developed into a mine. This is a matter of philosophy, and his philosophy was that we shouldn't be in what we call the raw exploration business. We always did a little bit of it, but not in a big way.

They were looking for something that we could buy or lease in New Mexico. Eventually in late 1956 they came up with an arrangement with a company called Sabre-Pinon, who had several properties in several sections of land in the Ambrosia Lake area. They had contracted originally with American Metals Company to develop the mine for them. American Metals had done a great deal

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[1]Helen R. Henshaw: Recollections of Life with Paul Henshaw: Latin America, Homestake Mining Company, Regional Oral History Office, University of California, Berkeley, 1988. Richard Stoehr interview, part of Knoxville District/McLaughlin Mine Oral History Project in process, Regional Oral History Office, University of California, Berkeley.

of work on it, had done a lot of drilling, verified ore reserves, had negotiated a contract with the Atomic Energy Commission for building a mill and milling the ore. One of the problems with it, though, was that the ore was below the water table, in a rather soft sandstone, and it would take in a great deal of water. Eventually, and very suddenly, American Metals just backed out and decided not to go ahead with it.

Homestake fell heir to this. Henshaw and Stoehr heard about it and went around to Sabre-Pinon and we were able to make a temporary arrangement with them, that Homestake would develop the mines and take over the AEC contract and build the mill. Sabre-Pinon would have a 75 percent interest, and Homestake would have 25 percent. It would be a limited partnership; Sabre-Pinon would be the limited partner and Homestake would be the managing partner.

At the same time they were negotiating with another group of companies. One of them was called Rio de Oro Mining Company; another one was United Western Mining Company. The person who was kind of trying to put all this together was named Clyde Osborne, who was working for himself. He was a metallurgist. They had some small properties and land grants in the Ambrosia Lake area also. I think United Western had a number of other companies in business with them. There was White Weld and Company, who was really a brokerage securities firm in New York, and San Jacinto Petroleum Company down in Texas.

The group of them put this together as another limited partnership with Homestake as the general partner, again a 25/75 percent venture. This was also in late 1956. There was an AEC contract to be negotiated there also. Clyde Osborne was well along on doing that, and on working on the metallurgy. Shaft sinking had already been started and development work was being done on the Rio de Oro Mine by Rio de Oro themselves. The arrangement called for Rio de Oro to continue to do their mining. The United Western Mine would be developed by Homestake and operated by Homestake, or the partnership. Homestake would build the mill, finance all of this, and mill the ore, but Rio de Oro would have to pay $1.52 a ton for every ton that they had milled at the mill.

Chall: Was this part of Circular 5 still?

Swent: No, they would be paid Circular 5 prices for the ore but charged $1.52 for the milling. Then the yellow cake that came out of it would be partnership yellow cake, and this would be sold as partnership yellow cake.

Chall: Yellow cake? Is that what you call it?

Swent: That's the final product of the uranium milling process, yes.

Chall: It sounds like a complicated arrangement. Did you keep good books?

Swent: It was very complex and eventually fatal, too complex. But anyway, all of this was developed in the last months of 1956.

In January Ab Shoemaker sent me down to New Mexico to do a feasibility study on these two ventures. Homestake did not want to put up all the money. They wanted to get a bank loan to do this, to build the two mills. It was a multimillion dollar project. So they wanted a feasibility study that they could take to a bank to support the loan. So I went down in January of '57. They had a little office in Albuquerque and another one out in Grants. They had taken over the old American Metals office in Grants. I worked on both projects.

The first thing to do was to calculate the ore reserves. We had a geologist from Lead come down, named Archie Slaughter. He was already there, working on ore reserves. I spent some time out in Grants, going out to visit the area, but there really wasn't a great deal to see. All we had was drill holes. You could see the topography and that was about all, where the mill sites would be. The plan that we adopted was to build two mills, one for each partnership, but side-by-side, with just a fence between them.

One of the big problems was power. There wasn't enough public power available in Grants. There was an REA [Rural Electrification Administration] line out there, but it was not anywhere near enough to supply the needs. Not only were there the Homestake needs, but there were other companies going into business there. Phillips Petroleum Company had a big venture going, and Kerr-McGee Corporation had a big venture going. In fact, Kerr-McGee's was much bigger than Homestake's, and Phillips's was similar to the Sabre-Pinon deal in size. They were all negotiating AEC contracts at the same time and needed power at the same time. This was the real problem, what to do about power.

We just didn't have enough time. The other companies were a little behind us. They thought they could bring power in by contracting for Public Service Company of New Mexico to build a power line out from Albuquerque--it's about eighty miles. Homestake didn't have time to wait for that power line, so we decided to buy large diesels, the electro-motive diesels of the type that General Motors produces and uses in their standard diesel railroad locomotives. We finally settled on what they called dual fuel engines. That is, you would use natural gas and diesel fuel combined. This was much cheaper than straight diesel fuel which the railroads used.

That was one of the early decisions that we had to make, what to do for power. Of course, at the time of the feasibility study no commitments were made. This was just a plain feasibility study. There were no commitments in either partnership. Homestake had rights up to certain dates to back out of both deals if things didn't work out as they anticipated.

I finished up the feasibility study in February. I went out to San Francisco to finish it, get it final typed and present it. It was presented at a board meeting. Ab was present and I was present. I presented the study and Ab recommended it and recommended that the board go ahead with it. They weren't too certain at first. They decided that they should negotiate a six-months extension of the arrangements with Sabre-Pinon at least, and that we would pay a certain amount of money for that extension of time. If we backed out, we would have to pay some penalty. If we went ahead with it, there would be no penalty.

We got an extension until June 30 of 1957, which would give us time to do additional checking of things. We were committed to sink a shaft on what was called Section 32, which was the United Western property of the venture called Homestake-New Mexico Partners. That was with Rio de Oro and United Western and Clyde Osborne. We were committed to sink that shaft, and Dick Stoehr was put in charge of getting that done. Ab had told me that if all these ventures came to pass that I would be put in as the manager of the whole venture, and Dick would be working for me.

So Dick started sinking the shaft. He started that very soon, in early '57. The idea was that by June of '57 that shaft would be down far enough that we could see what the water conditions would be like, the conditions that had scared American Metals off. (The Rio do Oro shaft would not serve this purpose because that ore body was above the water table.) So they went back and negotiated with Sabre-Pinon and got the six-months extension. In the meantime, while they were waiting for that, I went back to Lead and spent a little time in Lead. In March they got the extension, so I went back down to New Mexico. That was basically my permanent move. I left the family in Lead and I would go back every two or three weeks for a weekend or so. I was driving most of the time. Later I took to flying, but--

Chall: Those were long distances.

Swent: Yes. My family stayed on in Lead until the end of the school year. By that time it was getting fairly obvious that it was going to become a permanent venture. Ab said, "It's a ten-year job." Although the AEC contracts were only for five years, he predicted that it was going to be ten years at least because of the ore

reserves. He was sure we would get an extension of the contract to 1966.

So I went down in March and we began actually--not making commitments, but making all sorts of arrangements so that the minute we made the decision to go ahead we could trigger these and go ahead.

I think I'd better quit for now. I've got a lunch date again and I'm running late already.

Chall: Well, this is a good place to stop, because next time you'll be in charge.

The Role of Manager in the Homestake Hierarchy

[Date of Interview: December 1, 1987] ##

Chall: I want to ask you one question before we get started on Grants, which I think may tie into what you were doing previously in your last work at Lead and will be doing in New Mexico. That has to do with the work of the superintendent which you, I think, told me was later called manager.

Swent: Well, this is a matter of how a company chooses to use its titles.

Chall: Right. I'm going to quote you something from Joseph Cash on superintendents, because I'd like to have you fill in or explain a little bit more about it. You were working as an assistant to the manager at Lead--I suppose he may have been called the superintendent in other years, I'm not sure.

Swent: Well, that title changed over the years. The early ones were called superintendents and then later they were called managers.

Chall: Right. Then you went to Grants as a manager. So let me discuss with you what he says about superintendents, which was the term he was using at the time: "The influence of the superintendents cannot be overstressed. They ran the company insofar as its mining ventures were concerned." And then he says, "They made decisions on the spot. They were almost invariably backed by officers in San Francisco. The ultimate success or failure of the operation lay with them, relative to labor, the state, and the community. This autonomy probably lessened somewhat through the years, as the

company settled into more established modes of business procedure."[1] He was writing in the earlier days, but how does that seem to you in terms of your relationships with San Francisco while you were at Lead or as you began to work in New Mexico?

Swent: Well, I think he has assessed it correctly. When I was in Lead the manager still had a great deal of independence. However, major capital projects of over $10,000, I believe, still had to go to San Francisco to be approved. That was maybe one of the first limitations on the manager's independence. Then, as time went on and Homestake got more diversified, they began assembling specialists in various fields in San Francisco and exercising more and more control over the managers than they had in the past. This didn't really start until after I left Grants. In fact, I became one of the specialists who went to San Francisco.

When I was manager in Grants, the whole period I was there, I had tremendous independence, for which I was very grateful. It was in great contrast to the limitations that the other managers in the area had. There were basically four or five major companies working there. There was Kerr-McGee, Phillips Petroleum, Anaconda, and Homestake. We each had a manager, and I had absolutely the greatest independence of all of them. It was very clear that there was just no comparison between the independence that I had and the lack of independence that the other managers had.

Chall: Did that make it difficult to get something done, that you had all this bureaucracy to go through with them?

Swent: It did. It made it difficult to get cooperative work done, because most of them couldn't make a decision. Once we brought the subject up--we did institute a series of meetings where we met once a month to discuss local problems and common problems. But generally, if anything required action, they had to go back to their principals in the home offices and come back with the answer at the next meeting.

Chall: How long might that take?

Swent: Well, it depended on the subject. But one thing was really amazing to me. We had so much to do, and there were lots of big things, problems around. One of the things that came up was a contribution to the Boy Scouts. I suggested--and I felt that we could pay it without asking San Francisco--that we each give them $250. I suggested that we all do that. They all ran for cover. I couldn't get a direct answer out of any of them. "Well, are you sure that

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[1]Joseph H. Cash, Working the Homestake (Ames: State University of Iowa, 1973), pp. 20-21.

you want to give them that much?" Obviously this was outside their authority, and they had to go back to home offices. Finally we all gave $250; but with the size of the problems that we had, millions of dollars at stake, and some of them thrashing to get to be profitable, I couldn't understand. It was amazing to me that the bureaucracy worked that way. But that's the way it worked.

Some Historical Background on the Development of the Uranium Industry in the United States

Chall: Well, that's an interesting little sample. All right, we'll go on and talk about what you did as manager then.

Swent: Well, I thought maybe before I get into that I should give some background on the uranium business and how it stood at the time, so that you can understand why we did certain things, so that they make sense.

Chall: All right, that's good.

Swent: [1][To understand what the uranium business is all about, the first thing we must know is "isotopes" of an element. Present day theory is that atoms are made up of some 100 types of particles, but essentially of three types of particles: protons, neutrons, and electrons. An atom can be likened in many ways to the solar system. The center of a atom corresponds to the sun and is called the nucleus of the atom. The nucleus is made up of particles called protons and neutrons. Protons are particles that have a positive charge. Neutrons are particles that have no charge. Orbiting around the nucleus of an atom are one or more almost weightless particles called electrons. These have a negative charge.

The total number of electrons in orbit around the nucleus of an atom is equal to the number of protons or positive charges in the nucleus of the atom. The nucleus of a uranium atom has a positive charge of 92, so there are 92 electrons in orbit around the nucleus, in about eight layers.

The nucleus of an atom can have neutrons in it without changing its positive charge, since neutrons have no charge. But neutrons do have weight, so the presence of one or more neutrons in the nucleus of an atom will affect its weight but not its charge.

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[1]The following material was added by Mr. Swent.

Atoms of an element may thus have different weights, but the same number of electrons in orbit. The chemical properties of an element are determined by the number of electrons in orbit around its nucleus. Its weight and physical properties are determined by the total of all its particles.

Different atoms of the same element thus have the same chemical properties but may have different weights and physical properties. Atoms of a given element which have the same weight are called "isotopes" of that element. Many elements have only one isotope, but a number of elements have two or more isotopes. Uranium has several naturally occurring isotopes, the principal ones being ^{238}U, ^{235}U, and ^{233}U. These occur in the following virtually fixed percentages wherever uranium occurs naturally in the earth's crust:

Composition of Natural Uranium

^{238}U ---------	99.283%
^{235}U ---------	0.711%
^{233}U ---------	0.006%

The isotope ^{235}U has special properties. When its nucleus is hit with a neutron it becomes ^{236}U for a very small fraction of a second. ^{236}U is highly unstable and breaks into two nearly equal parts--forming two atoms of new elements of about half the atomic number of the original uranium--such as iodine, cobalt, barium, strontium, caesium, cerium, etc. It also gives off two or three neutrons and a tremendous amount of energy, generally in the form of heat. The sum of the protons, neutrons and electrons in the products is always less than that of the original atom. The difference represents matter that is converted into energy in accordance with Einstein's famous formula $E=MC^2$. This process of breaking up into lighter elements plus the release of energy is called "fission." The process of two or three neutrons given off by a fissioning atom of ^{235}U hitting one or more additional ^{235}U atoms and causing them to fission and thus keeping the reaction going is called a "chain reaction."

Thus the isotopes ^{235}U and ^{233}U are fissionable, but ^{238}U, which makes up 99.283% of all naturally occurring uranium is not fissionable. The concentration of ^{235}U in natural uranium is too dilute to sustain a chain reaction. To achieve a chain reaction the concentration of ^{235}U must be increased significantly over the natural concentration.

Therefore, the basic raw material objectives of the Manhattan Project and of the Atomic Energy Commission were to acquire natural uranium and to concentrate the ^{235}U in it up to a degree high

enough that the desired type of fission reaction could be sustained.][1]

The search for uranium began, really--at least the United States search for uranium began during World War II, of course, during the Manhattan Project, while the atom bomb was being developed. The first source of uranium that they found was an open-pit mine in the Belgian Congo called the Shinkolobwe Mine. This was a high-grade mine and the ore was shipped as ore, it wasn't processed. It ran one percent or greater; I'm not sure what the grades were. That was all classified information at the time and I've never seen anything published on it. I'm sure there is now. But it ran over a percent, which is very high-grade ore, and was what we call direct shipping ore.

Chall: Does that mean it came like this, like these rocks? [Mr. Swent has a collection of vials showing the process from rocks to yellow cake]

Swent: Yes, in barrels. The Manhattan Project at the end of World War II was replaced by the Atomic Energy Commission. Congress passed the Atomic Energy Act and brought all the functions of the Manhattan Project under the Atomic Energy Commission. As part of the organization of the Atomic Energy Commission they set up a director of raw material procurement who was to try to find uranium ore and purchase it for the government.

The first director of raw material procurement was John K. Gustafson, who was a very prominent exploration geologist. Later he became president of Homestake Mining Company and I worked under him. But at the time I didn't know him. In fact, I was working in Mexico at this time. This was just shortly after World War II. He hired for the AEC a number of prominent geologists and mining engineers and metallurgists to first of all, find deposits, secondly to evaluate them, both from a mining point of view and whether the ores could be processed metallurgically.

The first thing that they came up with was to continue at Shinkolobwe. But Shinkolobwe became depleted, mined out. The next thing that they came up with was the South African gold mines. They had a small amount of uranium that they could produce as a byproduct. So John Gustafson through Frank McQuiston negotiated contracts with the major South African gold mines to purchase uranium at fairly high prices, it turned out, compared to what they

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[1]End of added paragraphs.

later offered domestic people.[1] This group also reviewed all other known occurrences. There was a fairly large, substantial advisory committee set up to assist the Atomic Energy Commission. Dr. McLaughlin, who was at that time president of Homestake, was on that advisory committee, and also Howard Vesper who later was a director of Homestake. He was at the time in charge of exploration for Standard Oil Company of California.

The Search for Uranium Ore

Swent: The advisory committee advised John Gustafson not to conduct a massive search in the United States because they didn't think the United States was a good geological target to find much uranium. But John disregarded their advice and established a domestic procurement program. They first issued what they called Circular 5, which was a little publication that gave prices of ore, prices that the Atomic Energy Commission would pay for ores at different grades. This had an incentive to produce higher grade. As the grade got higher the price per pound of U-308 got higher.

Chall: That led to exploration, I would guess.

Swent: Yes, this led to a lot of exploration. But the first exploration was mostly by prospectors and small entrepreneurs, nobody with much capital. It took several years before anything really developed. The first major strike was the discovery of the Mi Vida Mine by Charles Steen in Utah, near Moab. He found a major deposit--at least it was considered major in those days. Although he was just about broke when he found it, he became a multimillionaire as a result of it.

This then influenced some of the established major mining companies to begin to come into the business. Some of those were Vanadium Corporation of America. They were one of the very early ones. Union Carbide, Atlas Corporation, Kerr-McGee Corporation, were some of the really early people in this business. Homestake followed very closely, beginning to get involved in about 1952. Steen's discovery was in 1948.

One reason for the major mining industry holding back was that they just weren't sure that this was going to be a lasting business. The AEC did make commitments, would issue five-year contracts for buying yellow cake from a mill if the contractor were to build a mill.

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[1]Frank Woods McQuiston, Jr. Metallurgist for Newmont Mining Corporation and U.S. Atomic Energy Commission, 1934-1982, Regional Oral History Office, University of California, Berkeley, 1989.

The Process for Recovering and Enriching Uranium

Swent: Maybe I should outline the process for recovering uranium. It's mined in rock just like ordinary rock, just the way other ores are mined, the rock that it occurs in. The crude ore is then crushed and ground in a grinding circuit in a mill. After crushing and grinding, the uranium is dissolved by treating it with one of two types of solvents. One is generally low-grade sulfuric acid--by low-grade I mean dilute sulfuric acid. Or there's what they call the alkaline process, where you treat it with a combination of sodium carbonate and sodium bicarbonate. These two methods will dissolve the uranium, although the acid method is a little more efficient. The problem with the acid method is that if the ore has a great deal of lime in it, more than 6 or 7 percent, the acid consumption gets extremely high and costly. The carbonate method has less efficiency but is not bothered by the presence of lime, which is a carbonate.

Chall: Was all of this worked out during the war, in the Manhattan Project,or prior to it?

Swent: No, the Manhattan Project did their own recovery, did their own milling, so to speak, on the Shinkolobwe ore. But I'm not sure where they did it or how they did it. I never heard how they processed it. The AEC, after they got established, set up pilot plants in Grand Junction, Colorado, and in Monticello, Utah. The National Lead Company became the contractor to operate these mills. The AEC from the beginning was quite interested and wanted to get as much of the raw material part of the program into private enterprise as possible. At first they worked with contractors. But their objective was to get the processing into private hands and let private industry take care of it, up to the point where secrecy was required because of the atomic bomb weaponry secrecy. This included all the stages, up to what's called enrichment of uranium.

But let me go back to the recovery of uranium from the crude ore. After the treatment by the solvents, then the solvents are separated from the ground-up ore, the now-worthless rock fragments. This is generally either a filtration process or a settling process where the solids settle out. Then the clear liquid that's recovered, that has the uranium dissolved in it, is precipitated. There are several methods of precipitation. But the general principle is that the uranium is precipitated out, and the precipitate then is this yellowish-type material that you see here. [yellow cake samples in vials on table] This was then filtered out, dried and the powder packaged for shipment to the Atomic Energy Commission in 55-gallon steel drums.

In our plants we precipitated the yellow cake by adding caustic soda (chemically sodium hydroxide or NaOH). The precipitate was sodium diuranate--$Na_2H_2O_2$, but also included some impurities.

The Atomic Energy Commission then would take this material. At the time that most of these things were going on that I'll be talking about, there were two plants that could receive the yellow cake and treat it. One was Allied Chemical Plant in Metropolis, Illinois; the other one was an AEC-run plant on the outskirts of St. Louis, a place called Weldon Spring. At Weldon Spring the yellow cake was dissolved in nitric acid and then purified greatly and converted chemically into UF_4, which is uranium tetrafluoride. Then by intense chemical treatment additional fluoride was added and it was converted on up to UF_6, which is uranium hexafluoride. The UF_4 is a green powder, and that was called green salt, as contrasted to yellow cake. UF_6 is white, and this is always just called UF_6 or uranium hexafluoride.

At ordinary temperatures and pressures uranium hexafluoride is partly a solid in equilibrium with a significant amount of the gas. At these temperatures and pressures the solid goes directly from the solid state into the gaseous state, without going through an intervening liquid state. (Chemicals that do this are said to "sublime".)

The chemical properties of ^{235}U are the same as those of ^{238}U, so that it can't be separated by chemical means. The only difference between ^{235}U and ^{238}U is the slight difference in the weight of the atoms. Thus $^{238}UF_6$ has an atomic weight of 238 + 6 (6 x 19) = 352, whereas $^{235}UF_6$ has an atomic weight of 235 + (6 x 19) = 349, for a difference of 3, or about 0.85 of 1% from $^{235}UF_6$. All methods of separating ^{235}U atoms from ^{238}U atoms are based on this weight difference. The method in use in the U.S. is extremely expensive and is done in tremendously large plants called "gaseous diffusion" plants. These were at one time owned by the AEC, and are now owned by the Department of Energy (DOE). Some foreign plants use a centrifugal process, but the feed material is still the gaseous uranium hexafluoride.

At the diffusion plants the UF_6 is put entirely into the gaseous form by proper control of the temperature and pressure. The molecules of a gas are constantly in motion, darting about in random directions, with their speed directly dependent on the temperature and inversely dependent on their molecular weight.

Due to their slight difference in molecular weight the $^{235}UF_6$ molecules move slightly faster than the $^{238}UF_6$ molecules when at the same temperature. The UF_6 gas is put into a cylindrical, elongated

chamber divided in the long direction into two zones by a thin and porous membrane or "barrier". Some of the gas diffuses through the membrane. This is found to have a small enrichment in $^{235}UF_6$ to about 0.714% $^{235}UF_6$ from the original "natural" 0.711%. The gas in the first part of the chamber is depleted slightly in $^{235}UF_6$ to about 0.707%. This is because the $^{235}UF_6$ molecules are moving about faster than the $^{238}UF_6$ molecules, and so tend to hit the membrane more frequently and so have a better chance to go through the membrane. The enriched material is withdrawn separately from its side of the membrane and the depleted material is withdrawn separately from its side of the cylinder and membrane. By repeating this process thousands of times, $^{235}UF_6$ of any desired degree of purity can be produced, up to virtually pure $^{235}UF_6$. The greater the purity, of course, the greater the expense and the greater the danger of "spontaneous fission" unless certain precautions in handling and storing are strictly followed.

Conventional electric power producing nuclear reactors use uranium enriched to 3 - 5 % ^{235}U. Bombs, weapons and naval vessel reactors used to produce steam for propulsion use uranium enriched to 90% or more ^{235}U.

Chall: So this passing it through the membrane over and over again--is that the enriching process?

Swent: Yes, it is.

Chall: That separates the ^{235}U from the ^{238}U, is that it?

Swent: Right. In our day the 3 - 5% enriched material then would be sent to a fabricating plant, which would then convert it back from UF_6 into a solid oxide again. The fuel rods would be made out of the enriched oxide, and the fuel elements that go into a reactor would be assembled, shipped to reactors and finally put into reactors.

Chall: At that time we are talking about was the Atomic Energy Commission buying the ore and the yellow cake only for weaponry, or was there a move on to purchase it for power? Did that come later?

Swent: Well, there was a transition period. When the commission first began in the 1940s, after World War II, the objectives were entirely military. During the Eisenhower administration, Eisenhower came up with the Atoms for Peace program. The big push came on to--let's see, when was Eisenhower elected? 1952. Well, in the early fifties, then, came the push for power. By the time Homestake got into the business in any substantial way, the Atomic Energy Commission had more than it needed for military purposes and was pointing entirely towards an industry for the generation of electric power. The objective was to try to establish a completely

viable industry from raw materials right through the production of power. Not necessarily in one integrated company, but at least have all the elements so that there could be independence in the program. They were eventually successful in this, although it took quite a few years before it came about.

Chall: Was this a more expensive process than, let's say, gold?

Swent: Yes. Yes, particularly the processing of the material was more costly per ton of ore than gold recovery is. It is basically a very similar process. The metallurgy and the equipment used were very similar, but the chemical costs were considerably higher.

Chall: So you were all kind of feeling your way then?

Swent: Yes. There were new chemicals and there were constantly new developments.

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There just didn't exist the knowledge on uranium that exists on other metals. The other metals had been searched for, for hundreds, thousands of years in the world's history. Uranium was a real newcomer. In the first place, nobody knew how it was distributed in the earth's crust, nobody knew what the geological factors for its location were, and no one knew much about metallurgy for it. All of these things were worked out and gradually improved. There was just a big explosion of knowledge in the 1950s and sixties, into the seventies, for uranium, as it sort of tried to catch up with the knowledge that existed for other metals.

The Atomic Energy Commission's Licensing Program and its Effect On Exploration and Production

Swent: The Atomic Energy Commission in its early operations required everyone who wanted to sell ore to have a license to do so. You were free to prospect for ore; there was no limitation on that. Common sense would tell you that they couldn't limit it. But if you wanted to sell it, you had to obtain a license. It was an individual license in the early days. Then they backed away from that on their private industry concept; they backed away from the individual licenses and issued what they called a general license. Theoretically they retained control over the substance, but by publishing a general license in the federal register it gave anyone the right to mine it.

The theory was that if they really had to, for some reason, control this more closely, they could revoke that license in the federal register by publishing a withdrawal. But that never did change, and the general license ended all the problems that individuals had in getting licenses. There weren't problems, but there were just delays. It took time to get them and they were a nuisance--had to be renewed periodically.

The mills had to be licensed to possess the yellow cake. Once the material was concentrated to where it was in a higher concentration than existed in the natural ore, why then you did have to have a specific individual license. The licenses for mills as time went on became more and more complex. Many, many conditions were put into them. In later days the environmental conditions became the major part of these licenses.

The first contracts that the Atomic Energy Commission issued for purchasing of yellow cake were five-year contracts. They paid for the material in two ways: They allowed a certain amount of money, usually something on the order of eighty-eight cents per pound of U-308 for what they called the depreciation allowance. This was to pay back over five years the investment in the mill. Then they had a base price for the yellow cake, which was so much a pound. And this originally started out at somewhere around eleven dollars a pound. Gradually, as the technology got better, and the ore deposits got bigger, and higher tonnages were being treated, the cost got lower, and they reduced these prices. Eventually they standardized in the sixties on an eight dollar a pound price. Then in 1968 they reduced it even further.

Anyone who built a mill was required to buy ore from independent producers, usually up to about 20 percent of their capacity, at prices no less favorable than Circular 5, that is, no less favorable to the seller than AEC Circular 5.

Chall: What was the reason for that?

Swent: Well, they wanted to go out of the ore-buying business themselves. In fact, once they got enough mills established, the AEC took the ore that they had bought--they had buying stations scattered around the western states where most of the discoveries had been made--and sold that ore to the mills at Circular 5 prices. They had paid Circular 5 prices for it. It was essentially a break-even transaction for them. They got their money back. The buyer would process it into yellow cake and sell it at eight to eleven dollars a pound and make their profit on the milling. Eventually they disposed of all the ore that they had bought at these buying stations.

As I said, the early contracts were for five years. Then they put an end date, March 31, 1962, on contracts. If you contracted after 1957, you had less than five years. There weren't really very many contracts issued that ran less than five years, because somewhere along in that time they made a public announcement that they were going to extend the program to 1966. This then became a real thorn in their sides, because by then it was obvious that the raw material program was just becoming a tremendously expensive program for the government. They couldn't continue to underwrite purchasing everything produced. The production was getting so great and the military needs were all met. They couldn't even foresee that they would need all that was being produced for power right away.

Their problem was, the reactors weren't developing as quickly as the uranium supply was. So they did what they called "stretch-out". If you wanted to extend your contract from 1962 through 1966, you had to reduce your rate of production and take a lesser price. This was what they called the first "stretch-out" program. Later they had a second stretch-out program that I'll come to as we go through the operation.

Chall: Was that difficult for all of these various companies that were in on this--particularly, let's say, the many partners that you were involved in--just to plan ahead when they weren't really sure what the stretch-out was?

Swent: Well, the Homestake-New Mexico partnership never went beyond the 1962 stage. In fact, it ended in '61. It came to an end as a result of the stretch-out program. The partners couldn't agree on it. So you're right, it was a real problem for that partnership. For the Homestake-Sapin Partners this was not a problem. The reason it was not a problem for them is they had plenty of ore. The problem for the Homestake-New Mexico Partners was that basically there wasn't enough ore within the ownership of the partners to justify a 1966 contract. They wouldn't have been able to fulfill it. That was the basic problem. If they could have, there were all sorts of problems of agreement anyway.

Chall: We'll probably get into some of this later, but I would guess that you would probably have had to be concerned with your employment practices. The mine and mill and everything else would have had to be stretched out or slowed down or something.

Swent: By the time I was sent to Grants in 1957, the 1966 program had been announced by the AEC. But it was only a press release and it never got to be anything but a press release. People were very nervous about this because a press release by a federal agency is not a real commitment. They can change their minds overnight. So there

was a lot of uncertainty about this. Previous programs had been put into the federal register. Once that's done, that's an official act. Then it takes an official act to reverse it. That's not as easy to do as just changing your mind overnight.

Chall: It made planning a little difficult!

Swent: Ab told me when we were talking the job over and he was going to send me down, "It's a ten-year job." Because we had the initial five years and then he thought we would get the extension of the contract through '66. So this was early '57 and he said, "It's a ten-year job."

Chall: Well, he understood it.

Swent: Oh yes, Ab understood the business very well.

Now the early discoveries in the uranium business in the United States were essentially a reopening of old radium mines. There had been mines that before World War I had been mined for radium in the Utah-Colorado plateau area. Some of them had been shut down and were reopened. Of course radium is simply one of the elements in the decay chain of uranium. So that if there's radium present there's usually uranium present. These were the first mines opened.

As they learned more about the geology they found more and more of them. It spread. There were discoveries in Wyoming--not very major at first--and in Arizona, and lastly, in New Mexico. Well, not lastly. The last major discoveries were in Wyoming. A little bit was discovered up in Washington, and some very minor amounts in California and Idaho. But the developments in the central states of Utah, Colorado, Arizona, New Mexico, and Wyoming came so fast that they basically had a big boom on their hands. The Atomic Energy Commission was just having a tough time controlling this. It eventually got to the point where they finally had to say they'd put a limit on what they would buy.

They established a cut-off date. On November 24, 1958, the AEC formally announced that they wouldn't buy production from ore reserves discovered or developed after that date. Then they instituted a very large program to estimate the ore reserves as of November 24, 1958 of every individual and operator that had uranium ore reserves.

One of the things that I should mention was that all exploration results had to be turned into the AEC. You had to turn over your drilling results, this sort of thing, to the AEC whenever you found any uranium ore. So they had a pretty good idea of where

the discoveries where. They calculated reserves and said, "This is all we'll buy," from this property and that property, and so on.

As a result of that they later set up a series of allocations. Once they had calculated these reserves they set up an allocation to each property. These allocations then became very important in the milling contracts. The requirement for buying uranium ores from independent sources was modified so that a seller could only sell if he had an allocation. If he discovered other ore on a property that didn't have an allocation, he couldn't sell that to a mill. Or if the mill bought it, the AEC was not required to buy the yellow cakes that came from it.

Chall: So that generally just shut down exploration.

Swent: It had that effect, yes.

Chall: At that time you were growing concerned and you had your allocations established, I assume.

Swent: Yes. Some of the actions that we took were based on these allocations.

The Town of Grants and its Extraordinary Growth

Swent: The town of Grants in 1953 had about 2,500 people. It had been founded as a railroad town when the Santa Fe Railroad was built. It's right on the Santa Fe Railroad. There's a double track system from Chicago to Los Angeles. Also it's right on U.S. Highway 66, now Interstate 40. In addition to being a railroad camp it later developed some timber business from the Zuni Mountains. The Zuni Mountains are a few miles to the south. Grants itself is 6,500 feet high and on a very flat desert area. It's on the flanks on Mt. Taylor, which is an extinct volcano--it's not active now. But that's 12,000 feet high. There are old lava flows in the area on two sides of Grants.

So Grants was sort of in a little sheltered area between these high mesas of lava flows. The Zuni Mountains to the south had timber and also fluorspar. They had fluorspar mines in the early 1950s which were shut down by competition from Mexico. Mexico, including San Luis, went into production of fluorspar in great quantities in the early 1950s. The mines in the Zuni Mountains all eventually had to be shut down. They couldn't find a market and couldn't compete. The Ambrosia Lake area, where we had mines, is at the 7200 foot level.

The other thing that Grants developed--there was an agricultural area a few miles to the west, near a village called Bluewater, maybe five miles away. They developed carrots. There was a tremendous carrot industry. They were close to the Navajo reservation, so for picking carrots every year they brought in hundreds of Navajos and had little wooden huts scattered around in these fields where the Navajos could sleep. It was all stoop labor, of course, but a tremendous production. For some reason, the Grants carrots, the green leaves on top of them would stay green longer than those grown in other areas. I don't think anybody has ever explained to me why this was true. A lot of people jokingly said that it was the uranium, but actually the soil that they grew in was not near the uranium deposits. They had a tremendous industry there. They were shipping out railroad carloads of carrots.

Just about the time that the uranium boom started, the carrot industry started cutting off the greens and packaging carrots in cellophane and plastic. The Grants carrots no longer had an advantage. As long as the greens were shipped they could get a higher price than the Texas and California carrots could. But they lost this advantage once the packaging changed, and gradually the carrot-growing declined. It was declining in the first years that we were in Grants.

The town grew from 2,500 to around 10,000 with the uranium boom. It hit 10,000 probably in 1960. I think it hit 10,000 in the 1960 census. But the growth of the district was greater than that. There were several towns around. There was a neighboring town, in fact, it was right adjacent to it, called Milan. It was established by Salvador Milan, who had been born in Spain and settled in the Grants area and owned a lot of land in the area. He finally organized his own village and had it incorporated and established it as Milan. That grew to have 2,000 to 3,000 people. Just four or five miles south, south of Grants and part of Milan, there was a big lava field. South of the lava field was a little village called San Rafael. It was four or five miles away. That grew tremendously. I'm not sure what its population was. There was a little village of Bluewater, which was to the west, out past the carrot-growing area. To the north, again when you came back onto the slopes of Mount Taylor, the northern slopes, there was a town of San Mateo that also took in a lot of uranium people.

The big thing that saved the uranium industry was the house trailer. If it hadn't been for house trailers I don't know if the uranium industry could have grown as fast as it did. Trailer parks were very common, because there was no housing for people. But you could haul in these trailers and hook them up, put in the

facilities for hooking them up much more easily than you could build houses.

Chall: Who had to plan all that, I guess you'd call it infrastructure? I mean, sewage, and water, and plans for trailers?

Swent: Well, these were some of the major problems that we came into. I'll go into this as I go into the job at Grants. It was a combination of community and industry efforts. The total community eventually reached around 16,000 people.

Chall: Taking in those other towns?

Discovering Uranium and the Beginning of the Industrial Boom

Swent: Yes, if you take in these little towns that I mentioned. The early uranium discovery in the Grants area had been made in the early fifties. AEC geologists were spreading around the countryside. They had come into the Grants area and told people what they were looking for and described what uranium ore would look like. They said it had little yellow specks or little yellow seams in the rock, and if anybody found any of those, to let them know.

There was a Navajo sheepherder named Paddy Martinez who, one day in the early 1950s, was out on the slopes of what's called Haystack Butte, to the west of Grants by about, probably ten miles in a straight line. He was tending his sheep out there and he picked up some rocks to throw at them to head some of them off in some direction. He noticed that some of these rocks that he was throwing had some yellow in them. So he gathered up some of these and took a boxful in to a man named Carroll Gunderson, who was the major merchant at that time in Grants. Carroll knew the AEC geology people, so he called them. They looked at these specimens and said, "That's uranium, all right."

It turned out that the site where Paddy had made the discovery was on land owned by the Santa Fe Railroad. In the 1860s, when the railroad was built, the railroad was given a great deal of land under the Railroad Acts. Over the years the Santa Fe Railroad had sold off the surface rights to most of this land that they had. But they had retained the mineral rights and the right to build a railroad through it. It was a strange type of separation of titles, but they kept the mineral rights. So the Santa Fe Railroad got pulled into this. They hired a mining engineer named Tom Evans who began to put this together. They decided it was too big for them.

Anaconda's Mines and Mills ##

Swent: So, Santa Fe approached the Anaconda Company, and interested them in building a mill and mining this limestone ore that had been discovered. Now the limestone ore, of course, is carbonate and had to be treated by the alkaline or sodium carbonate process, because it would just eat tons and tons of sulfuric acid. So Anaconda came in and started building a small mill--well, it was I think about a 200-ton-a-day design. Before they finished it they had already found enough ore there that they increased the tonnage, up to 600 tons a day, redesigned it and expanded it.

They built their mill right near the town of Bluewater, right on the railroad. Bluewater was on one side of the railroad tracks, on the south side, maybe a mile or so from the tracks. Anaconda built right adjacent to the tracks, on the north side of it, a little west of Grants and Milan. The Anaconda manager was an experienced mining engineer named Jack Knaebel, who worked in many parts of the world and was one of, what I would call, the old school of mining engineers.

Chall: What does that mean?

Swent: Well, in my mind he was one of the rough and tough guys from the 1920s and thirties. He was a very aggressive person. He flew, and he started doing a lot of prospecting around the Grants area. While the mill was being built he found a major deposit near the town of Laguna, which is east of Grants, oh, some twenty-five miles roughly, just off the highway into Albuquerque. The discovery was several miles northeast of Laguna. This again was an open-pit proposition. It was a sandstone ore, no longer limestone there. So they got an expansion to their AEC contract and expanded the mill to about 2,000 tons a day.

Chall: The difference in the kind of ore, did that necessitate a different kind of chemical that was required?

Swent: Yes. The expansion was an acid plant, so they had two circuits in the mill. One was the carbonate circuit, the other was the sulfuric acid circuit. This was now twenty-five miles or so away, so they had a railroad spur built out to the mine site. They shipped the ore by railroad from the mine to the mill. They decided rather than to build two mills separately, they would just expand where they had begun to build it. Eventually, though, there was much more of the Jack Pile ore than there was of the Haystack Butte ore, that was their big thing.

Chall: What did you call that?

Swent: Jack Pile, they called it. It was named after Jack Knaebel who found it. That was in, probably 1954, right around in there. Then of course, people began looking all around the area for uranium.

Stella Dysart Leases to Kerr-McGee and the Rio de Oro Mining Company

Swent: There was an elderly lady in Albuquerque named Stella Dysart who, back in the 1920s and thirties, had picked up a lot of land in the area that was known as Ambrosia Lake, northwest of Grants, for oil. She had speculated on oil there. In her speculations she had subdivided a lot of this land into very small tracts and sold off interests to hundreds of people in order to raise money for drilling. She had done a little bit of drilling, but hadn't ever found any oil. At one point I think she was convicted of fraudulent promotion or something and got a short prison term. But she came out of that and sort of lived off of the money that she got from selling land.

A geologist named Louis Lothman was prospecting the Ambrosia Lake area. He came on an old well that she had had drilled. The cuttings from the hole were there in plastic bags. It was the custom when she drilled there to take the cuttings and bag them by footage.

Chall: Any reason for that?

Swent: Oh yes. These cuttings were all examined geologically to see what the mineralization was and what type of rock they were and that sort of thing.

Chall: I see. But only in terms of oil?

Swent: No, she wasn't dealing entirely in terms of oil.

Anyway, Louis Lothman put a geiger counter on these cuttings and he got a significant count. So that led to drilling for uranium in the district, in that area. It was discovered at several hundred feet of depth. I think at that point it was around probably four or five hundred feet deep.

Chall: Is that still considered an open pit?

Swent: No, that would be underground mining there. So the first discovery out there was on Stella Dysart's ground. There were two sections there that had ore on them. One was Section 10 in Township 14

North, Range 10 West. The other was in the southwest quarter of Section 11. The Section 10 property she leased to Kerr-McGee, and the southwest quarter of Section 11 she leased to what eventually turned out to be Rio de Oro Mining Company. I think it was at first leased to somebody called Midcontinent, and then in turn Midcontinent leased it to Rio de Oro.

Rio de Oro sank a shaft and this ore was--well, I'd better go back and describe. Once the ore had been found there, of course, there was prospecting and drilling all over the area. The ore was found in what was called the Westwater Sandstone, which was a very coarse sandstone. Some of these rocks here are Westwater Sandstone. [points to samples of rocks on table] It's a very coarse-grained sandstone, very soft. In the western end of the district where the discovery had been made, it was above the water table. Then, as it went south it went into a syncline. The bottom of the syncline was below the water table. The syncline pitched downward to the east. As it was followed to the east it became deeper and deeper and further and further below the water level. So, fortunately for Stella, her mine, or the Rio de Oro Mine, and the Kerr-McGee mine on Section 10 were dry mines. They had no water in them. Those that were developed in the syncline later were all wet, because they were below the water table.

Homestake's Partnership Arrangements: Homestake-New Mexico Partners; Homestake-Sabre-Pinon Partners

Swent: Dick Stoehr and Paul Henshaw for Homestake had negotiated both the Homestake-New Mexico Partners arrangement and the Homestake-Sabre-Pinon arrangement. The Homestake-New Mexico Partners agreement put the Rio de Oro Mine into the partnership, but since it was already operating it was to continue to be operated by Rio de Oro themselves. Homestake was to finance and build and operate the mill. Then the Rio de Oro ore would be milled at that mill.

United Western contributed its properties, which was primarily Section 32, Township 13 North, Range 9 West. But this was now further east and was below the water level. This was to be a wet mine. Homestake was to furnish the capital for sinking a shaft and developing it and mining it. Homestake was to operate this mine. The ore was to be milled at the partnership mill.

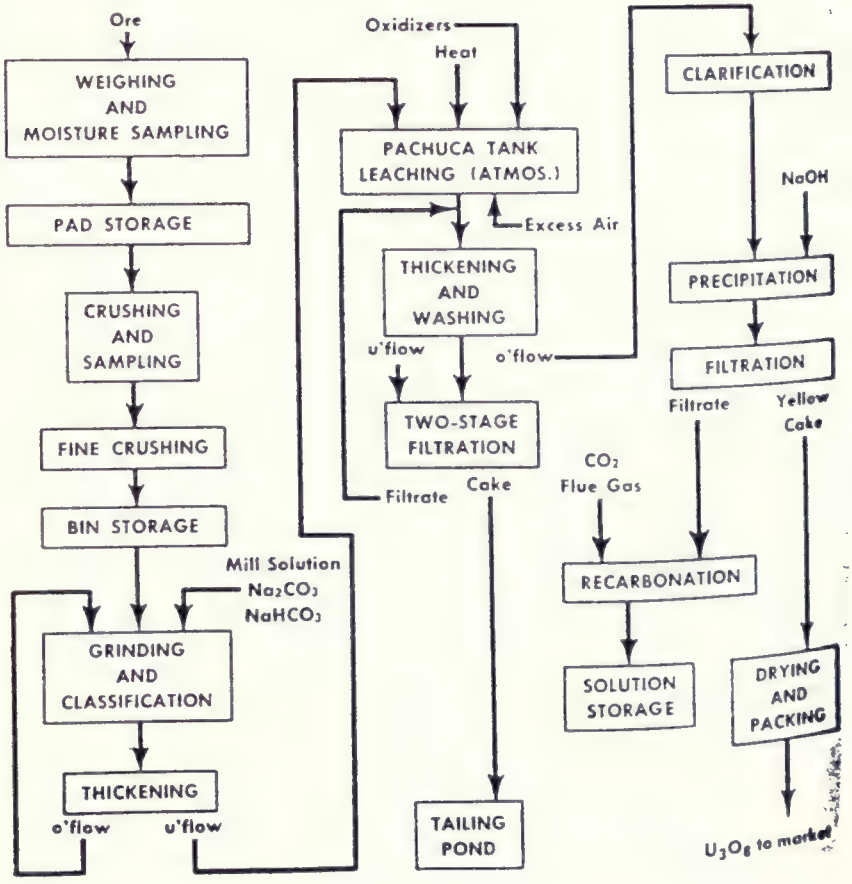
The Sabre-Pinon arrangement included three major sections, Sections 15, 23, and 25 in Township 14 North, Range 10 West. Section 15 was close enough to Sections 10 and 11 that some of its ore was above the water table and some below. It was straddling

Homestake-New Mexico Starts Milling

THE NEW Homestake-New Mexico Partners 750-tpd uranium mill commenced operation Feb. 3 on Dysart mine ore stockpiled at the plant site during the construction period. The first yellow cake was barreled on March 5. Crushing, storage, and processing plants are situated on the south half of Section 26, T 12 N, R 10 W along the west side of New Mexico Highway 53 leading to the Ambrosia Lake Mining area. These are designed to process ores from the Dysart mine of Rio De Oro Uranium Mines, Inc., and mine 32 of H-NMP, both in the Ambrosia Lake area some 24 miles distant. The Dysart mine is currently producing about 700 tpd assaying 0.25% U_3O_8. Mine 32 is rapidly nearing the production stage. Custom ores will be accepted at the new mill if amenable to the process employed—namely, carbonate leaching followed by caustic precipitation to produce a specification grade yellow cake.

Mill operations include grinding with solution crushed and sampled ore to 65 mesh in a ball mill-classifier circuit; thickening of classifier overflow to 50% solids; leaching thickened pulp in hot (180 deg F) solutions with excess air for 36 hr in Pachuca tanks; dilution and washing of leached pulp in one stage of thickening; thickened pulp (50% solids) filtration and washing on drum type vacuum filters; second stage drum type filtering to further wash pulp; pumping washed solids to tailings; clarifying pregnant solution; yellow cake precipitation from pregnant solution with an excess of caustic soda; yellow precipitate filtration in pressure filters; yellow cake drying and packing in drums for shipment; barren solution recarbonation in cypress packed towers using boiler house flue gases as source of CO_2; and return of recarbonated solution to leach circuit or mill solution storage.

HOMESTAKE-NEW MEXICO PARTNERS
GRANTS, N. M.



the water table. Then 23 was completely below the water table and so was 25. In fact, 25 was the wettest of the three; it was the deepest. So Homestake was faced with developing three mines below the water table and one initially above the water table.

In addition, the Homestake-New Mexico Partners arrangement or agreement provided that Homestake could have ores milled at the partnership mill, if Homestake found or developed any ore in properties that it owned independently. They were given an allocation of 150 tons a day through the mill. This gave Homestake an incentive to try to find ores to put into that mill. Those three sections that were in the Sabre-Pinon partnership were the ones that Sabre-Pinon originally had American Metals look at and that American Metals had negotiated an AEC contract for, but had never signed. But they had negotiated a contract to produce from those three sections, so the Homestake-Sabre-Pinon partnership agreement was limited to those three sections.

Homestake made another agreement called the Westwater Agreement, which provided for other sections. Sabre-Pinon had, through a man named Victor Salazar, who had been very powerful politically in the state, entered into two leases with the Santa Fe Pacific Railroad Company. They leased, oh, I've forgotten now how many sections of railroad land, but it was probably on the order of fifteen to twenty. They just selected three of those that they had known ore reserves on for the Homestake-Sabre-Pinon venture, and reserved the rest of them to Sabre-Pinon.

Then Sabre-Pinon formed a development company called Westwater Corporation and the remainder of these sections were placed into Westwater Corporation. Originally, of course, Westwater Corporation was owned entirely by Sabre-Pinon, stockholders. It was one of these so-called spinoffs. Sabre-Pinon gave the stock of Westwater Corporation as a stock dividend to their shareholders. Originally they were all the same and Sabre-Pinon ran it all. But over time Westwater stock began to be sold, and eventually became independent of Sabre-Pinon. They had to deal with Westwater Corporation separately.

Chall: That was then part of this--

Swent: Yes. The man who had made these leases for the railroad was Victor Salazar. A very personable, charming fellow, very very smart, very bright. As I said, he had been very politically influential--he had never run for office, but he was an advisor to the governor and at one time the head of the Bureau of Revenue in New Mexico. Very, very highly placed and very wealthy.

He and a fellow named Dick Bokum, Richard D. Bokum II, had been a combination. They had entered business together. Victor was the land man and Dick Bokum was the exploration person. Dick was large, very loudspoken but at times a very charming person. He made his decisions very quickly. He and Victor were in many ways completely unprincipled people. Eventually they wound up fighting each other. But they began working together and for a long time it was a very successful combination.

At the time that Dick Stoehr and Paul Henshaw negotiated with Sabre-Pinon, the president of Sabre-Pinon was a man named Hugh Craigie, who had been an old-time mining engineer in Mexico in the Santa Barbara and Parral districts in lead/zinc mining. I had heard of his name long before the uranium boom came along; I had heard his name when I was in Mexico, but hadn't met him. I did meet him and deal with him in New Mexico. He was president, although he was not the majority stockholder. Dick Bokum was by far the larger stockholder in Sabre-Pinon. And Dick Bokum was always really the moving force behind it.

The original agreements were made with Hugh Craigie. Then after maybe a year of agreement, Dick Bokum assumed the presidency and Hugh Craigie became the vice-president, but was Dick's mining man. Dick Bokum was not a mining person himself.

I'm just trying to kind of set the background here.

Chall: It is so complex.

Swent: To try to fulfill the 150 tons "put" that Homestake had contracted to the Homestake-New Mexico Partners mill, they entered into an agreement with Westwater Corporation to do exploration work on the sections that the Westwater Corporation had. Homestake had the right, if they developed ore, to put the ore-bearing lands into production. Now the fellow who headed up Westwater Corporation and was president was also a very close associate of Dick Bokum's, Ed Brosseau. Brosseau, Salazar, and Bokum were all very close and all very capable people.

Dick Stoehr was in charge of our exploration program there. We also had Dick in charge of sinking the shaft on the Section 32 property for Homestake-New Mexico Partners mine, for United Western. We entered into an agreement with another company called the Entrada Corporation, which had additional lands. That exploration work was also under Dick.

Part B Langan Swent Assumes Management of the Partnerships

Early Managerial Assignments

Swent: When Ab sent me down to get into this, we started discussing how we would staff it and that sort of thing. Once it became clear that it was going to be a venture, he said he would let me have Don Delicate from the Moab properties. They would get someone else to run those, and Don could come down and be mine superintendent for me. As far as the milling end of things was concerned, why, at Homestake-New Mexico Partners, one of the limited partners was Clyde Osborne, who was a metallurgist. He had been one of the persons who welded the group together to deal with Homestake. So we decided we would use Clyde as the metallurgist for the Homestake-New Mexico partners mill. Sabre-Pinon had a metallurgist, Eugene Allen, whom they had acquired when they were dealing with American Metals. We planned to use him as the metallurgist for the Sabre-Pinon mill.

I went back in March of 1957 after having done the feasibility studies. I must say that I got a lot of help in the feasibility studies, which I spoke of earlier. I didn't do it all alone. I got lots of geological help and metallurgical help and estimates on mill costs and this sort of thing from Eugene Allen. He had sat in on the negotiations with the Atomic Energy Commission and he had a very complete record of the negotiations. The AEC, when we formed a partnership, forced us to negotiate anew. They wouldn't just transfer the contract that American Metals had negotiated. They wouldn't honor that. They said they had to negotiate a new one. This meant a lower price for yellow cake, in essence. But Gene sat in through all those negotiations. I didn't participate in them. I had enough to do in Grants as it was.

Gene essentially settled the metallurgical process. The first thing that we did, basically, was to get contractors to build these two mills. Homestake contracted--and this was done through Ab Shoemaker--with Western Knapp Engineering in San Francisco to build the Homestake-New Mexico Partners mill. They contracted at a later date, a few months later, with Utah Construction Company to build the Homestake-Sapin Partners mill[1] and to sink the Section 25 shaft and possibly additional shafts, on Sections 15 and 23. We contracted the Section 32 shaft to Centennial Development Company, who had done work for us in Utah. They had sunk the La Sal shaft and the North Alice incline in Utah.

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[1]Homestake-Sapin is the contraction of Sabre-Pinon.

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We were very pleased with their work there. But they were a fairly small company. Ab didn't feel that we should--we wanted to do a somewhat larger shaft on Section 25, and he didn't think that we should use them on that, which was probably a serious mistake. They were contracted for Section 32 shaft.

So the initial set-up as we got going in March of 1957 was that I had Dick Stoehr doing exploration for the Entrada and Westwater deals, and in charge of sinking the shaft on Section 32. Of course, he had Centennial Development doing it under him. We had Clyde Osborne working with Western Knapp Engineering in designing the Homestake-New Mexico Partners mill. We had Gene Allen working with Utah Construction Company on the design of the Homestake Sapin partners mill.

Pump Tests to Assess Water Flow

Swent: There had been a lot of legwork done on building the mills. One of the big factors was availability of water. One of the early things that we contracted Utah Construction Company to do was to assess the flow of water that we might run into in the wet mines. They drilled some wells out on Section 25 and did pump tests on them and came up with some horrendous flow rates, some as high as 10,000 gallons a minute. It scared us to death. But when we questioned them on it, the reason that the flow rates were as high as they came up with, was because they had assumed a very, very high development rate that was based on their tunneling experience and not on mining experience. They were what I call highball contractors and had done tunneling work. They had not ever done mining work up till that point.

Tunnel contractors generally drive tunnels on a much faster basis than a mining company would because they're not worried about equipment; they sell the equipment off when they're done and they don't worry about making equipment last or getting the best economics out of it. They usually work three shifts a day. They're just after rate of progress, regardless of cost. And they had assumed these high rates of progress. When we got them to scale down to what we thought were reasonable mining rates of progress, of developing and opening up areas in the mines, why, the water flows were considerably less, down to 2,000 to 4,000 gallons per minute. But they still were something to contend with.

Then we also did a similar pump test on Section 32 for Homestake-New Mexico Partners to see what we would run into there. These pump tests were very urgent. We needed those urgently to see

what we were up against in the way of water. This was the big uncertainty and why Homestake had negotiated, at least with Sabre-Pinon, the June 30 extension. Homestake had until June 30 of 1957 to back out of the agreements with Sabre-Pinon. They were pretty well committed to the Homestake-New Mexico Partners agreement, but the investment there was much smaller than the investment in the Sabre-Pinon thing. The Homestake-New Mexico Partners mill, for instance, was to be designed for 750 tons a day. The Sabre-Pinon mill was to be designed for 1,500 tons a day. So we were very anxious to get the assessment of the effects of water on the mining operations.

The pumping test on Section 32 was so urgent that Dick Stoehr and I decided that we would work on it on Easter Sunday of April, '57. We had to go out and change the piping around so that the discharge of the pump went to a certain place. I've forgotten all the details now, but we decided that we would do that. Everybody else was off for the day; nobody was working. So Dick and I decided we would do that.

Chall: So you actually went to the mine and spent the day there manning the pumps?

Swent: Yes, well, doing pipe work, basically. Dick's wife was in town, living there, and they had two children. She decided, well, this was Easter Sunday, so she would come out with the children and hide eggs around the Section 32 property for the children to have an Easter egg hunt while Dick and I were working on the pipes. Dick and I were working on, I think, six-inch pipe or something. It was hard physical work; that day was a terrible day. It was a very windy day.

In the desert there in Grants when you get a wind you've just got all sorts of sand blowing. A terrible sandstorm developed while we were working. It started out in the morning overcast and then the wind came up and it just got terrible. Pretty soon the children couldn't find the eggs. They were all buried. Margaret had put them out around in the open and the wind blew sand over a lot of them. They never did find some of them!

Chall: Could you keep track of your pipe?

Swent: Well, we could keep track of the pipe and we got our work done, but it was a very exhausting and memorable day. Dick and I both still have very vivid memories of it. [chuckles]

Anyway, we got our pump test done on Section 32. It was apparent that the water flow on Section 32 would not be as great as those on Section 25. Section 25 was deeper. Section 32, the

location was on the south flank of this syncline, where the Westwater was rising again and was closer to the surface. So it wasn't as deep as it was at Section 25.

Sinking the Shafts and Related Union Activities

Swent: Centennial Development Company moved in and started sinking the shaft. They had a contract with the steelworkers, who were CIO [Congress of Industrial Organizations]. The difference between the CIO and the AFL [American Federation of Labor] was that the CIO were what they called an industrial union, and a man could do a variety of jobs. They were organized for an industry. The AFL was the American Federation of Labor, what you call trade unions. They were all specialists. A man would be an operating engineer, and he could operate a compressor or something, but he couldn't do anything else. Maybe he could operate a hoist, but he couldn't get in and shovel rock, for instance, or run a drill. So the AFL had a lot of specialists.

Well, it turned out that Utah Construction Company had an AFL contract. They put at least twice as many people into sinking the Section 25 shaft as Centennial put into sinking the Section 32 shaft. The Section 25 shaft turned out to be very costly. It was difficult, too. They had some problems with the water once they got below water table. A very costly shaft. So when it came to sinking the Section 23 and Section 15 shafts, we really didn't want to use Utah. Even though we had an agreement that we could give them these shafts, it wasn't binding that we would give them to them. So we contracted Centennial Development to do the Section 15 shaft, which was more or less along the same size as the Section 32 shaft, and would be dry. But we let Utah bid on it, and also Centennial. They both bid, and some others. Centennial was the low bidder, and they were about one-half of what Utah bid. It was just amazing, the difference between the two. So then Centennial sank our Section 15 shaft.

We did have Utah sink the first 100 feet of the Section 23 shaft, which was dry, just enough to be able to erect the head frame over it and put a hoist on it. Then when that was done we sank the shaft ourselves the rest of the way. By this time Don Delicate was on the job. I think he came down somewhere along in May of '57, came down from Utah.

Chall: That means you hired your own labor and directed them?

Swent: Yes.

Chall: And they were not union?

Swent: Right. We didn't go into this lightly. Don and I went to visit another mine called St. Anthony, which was over near Laguna. It was an underground mine that American Metals had retained. They were still mining that. It was wet, so we went over to see what it was like. It was certainly very messy due to the water. But it had a complication that we didn't have, and that was that it had a lot of shale in it. The shale when wet gets very, very slippery and expands a lot. This caused them all kinds of problems.

The fellow that took us through it was named Jack Hawn. He was their foreman. He gave us a very vivid account of what their problems were and how they were meeting them and his ideas. We were very impressed with him. Then one day, a month or so later, he came into Don Delicate's office looking for a job. So Don hired him on the spot. He didn't know what he'd do with him, but he hired him, because he thought he was a very good foreman and would make a good foreman in the future for us.

He soon found work for him on headframes. Sabre-Pinon had purchased two huge used headframes when they were in with American Metals. They purchased them from some iron ore mines in the East, apparently for a cheap price. They had been dismantled and shipped, and the pieces were all thrown out on the ground, out in Ambrosia Lake, where the mines were to be. Sand was blowing over them and they needed painting. They had never been cleaned up or anything. So we gave Jack Hawn the job of cleaning these pieces and painting them. We gave him two or three student laborers, students that we hired to paint them.

There was a shaft-sinking job going on for Kerr-McGee nearby, and they had union labor over there. They came over and tried to intimidate our college students who were working on the headframe--before we hired Jack, actually. They had a portable compressor that we had put out there, and they were to use that for sandblasting the old paint and rust and stuff that was on these headframes before painting them.

The union men told the students in no uncertain terms that they had to get an operating engineer to operate that compressor. I told them to ignore that and go ahead and start it and use it themselves, which they did.

They were a little worried about this, but when Jack got on the job, he was experienced in all this stuff. It didn't bother him in the least. And the union men didn't bother him at all. So he went ahead, and that was his first job, painting this headframe.

It turned out that he had shaft-sinking experience. When we began talking about cheaper ways of sinking shafts we thought, well, maybe we can use Jack Hawn. He said he could put together a crew. We talked a lot with him. Don Delicate and I wanted to sink our own shaft.

We tried this out on Ab. By this time Don and I had lots of experience with Ab. We had both worked for him for several years. Ab was a man who was very knowledgeable in mining. He was very conservative, but he had a very stubborn streak. Once he took a position it was very difficult to get him to change. So we learned that you tried an idea out on him very gently and if you saw that he was opposing it, you didn't push it any more at that point. Because if you pushed him too hard, he would take a position and then he wouldn't change. But he would listen to reason, and if you went at him later with good arguments, why, you might be able to convince him to change his mind. But not if you had pushed him into a set position.

So we backed off this early shaft-sinking idea, and little by little, we fed him information about what we could do and how much money it would save. Shaft-sinking is a very specialized thing, and he was a little afraid of tackling it. But after two or three months we finally got him to agree to do this. As I say, it was sort of a question of spoonfeeding it to Ab rather than just jumping on him all at once if we wanted to sink this shaft ourselves.

Anyway, he finally okayed it after he got to know Jack Hawn and he had a little more confidence in him. We went ahead and took it over from Utah after they had gotten down 100 feet, which they did very readily from surface, just with a surface crane.

Chall: How far down were you going? About 300?

Swent: No, we were going to go to about 700 feet.

Chall: Well, that's quite a bit.

Swent: Yes. The Section 25 shaft was a little over 800 feet, about 850 as I remember. The Section 15 shaft was about 400. They got deeper as we went to the east.

The shaft-sinking went very well. It was much less expensive and there were very few hitches in it. Jack did a very good job of sinking it. We had some incidents out there. Of course, these shafts took many months to sink. By then we had started mill construction and had on the site Utah Construction personnel and an overall construction foreman who also had the responsibility for

the shaft-sinking at Section 25. I forget his last name unfortunately. I haven't been able to think of it for a long time. His first name was Dave, and he was a very experienced elderly fellow. I think this was his last job with Utah and then he retired. But he had lots of construction experience and union labor experience.

This Ambrosia Lake area was all fairly flat, and it was divided into sections. But on a lot of the sections there weren't even any fences. The roads out there were sort of haphazard. A lot of them were just tracks, ruts really, that ran from one shaft site to another shaft site, regardless of who owned it. There was no real road system at that point.

There were some other shaft-sinkings being done and I'm not sure whose this was, but a crew drove by Section 25 one day, just driving by in a jeep. They were from a nonunion contractor. All of a sudden a bunch of the Utah employees ran out. They had built a little shack there for changing clothes and things. And they ran out of this little building. Somebody had led a horse in front of the jeep. It was ambling across the road, and the jeep had to stop. Then this horde of people poured out of the shack and turned the jeep over with the people in it, because they were nonunion. I really scolded this construction man Dave for this. I said, "This is a question of discipline. You've got to discipline these fellows." And he said, "Oh, you know, this is just a spur-of-the-moment thing. We can't control those. They just saw those nonunion guys going by and they all got hot under the collar and rushed out and did it." And I said, "I don't believe that. I think that was a deliberate, staged affair, planned. That horse being led across at that point--it was not accidental. That was planned. As far as I'm concerned, you need to have better control over your people."

Well, about a month later he came back to me and he said, "You're right. I investigated this thing and you're absolutely right. The whole thing was planned."

Chall: So there was hostility.

Swent: There was hostility. There were other nonunion shaft-sinking operations going on. There was even some hostility between the steelworkers, the CIO people, and the AFL, since this meant jobs. At some points there were nails and tacks and stuff scattered out in the roads where the nonunion people had to drive, and stuff like that. It got fairly tense, but it didn't erupt into any real violence other than that overturning of the jeep. But we were all just a little bit on edge all the time over this.

Chall: Well, you didn't have any trouble on the shaft that you were sinking?

Swent: No, not in the long run. Of course, by the time we were doing that, Utah had finished the Section 25 shaft and those people were long gone.

Well, I think it's about time to call it a day. This is a logical point to stop.

Complex Management Responsibilities

[Date of Interview: December 11, 1987]##

Swent: I was initially designated the manager of Homestake-New Mexico operations. Don Delicate was manager of Utah operations. Later on they designated the manager at Lead as the manager of Black Hills operations, although at first that title wasn't used. That was something that came after Ab left there and went to San Francisco. I had authority over all the Homestake activities in New Mexico, including Homestake-New Mexico Partners and Homestake-Sapin Partners and activities outside of the partnerships, which were mostly attempts at land acquisition and exploration. We were trying to find a source of ore where we could fill the 150 tons per day that we had the capacity for in the Homestake-New Mexico Partners partnership agreement.

Basically I had to develop four underground mines, three of which were below the water level. One was partially below the water level. I had to choose our mill sites and build two mills. I had to put together two mining organizations, one for each partnership, and two milling organizations, one for each partnership. I had to find a source of power for all of this activity and a source of water for the mills. I had to deal with providing the infrastructure of housing and schools and street paving, sewers, water, medical care and hospitals for the employees.

I had to develop some detailed policies on labor--our general policy was that we wanted to stay union-free--and had to set up a wage scale. We had to get the AEC contract for Homestake-Sapin Partners. The one for Homestake-New Mexico Partners had been signed in December of 1956, but the Sapin one had not been finalized. We had to negotiate for a natural gas supply, for roads. And of course, I had to work with other operators in the district. Then there were a lot of legal matters and mining claim

matters, water testing, miscellaneous matters that had to be taken care of.

Chall: Did you have an attorney on your local staff?

Swent: We did not have an attorney in Grants as such. We decided to be represented in Santa Fe by the firm of Bigbee and Stephenson. That choice had already been made by the attorney in San Francisco by the time I came onto the scene. But all of these things that I just mentioned had to be developed simultaneously, not one at a time. I spent my days dividing my time between these many projects. Sometimes the days got pretty long!

I think I mentioned before that in early 1957 Homestake asked for an extension to June 30 with Homestake's Sabre-Pinon arrangement in order to do some water testing. And Sabre-Pinon granted this extension. We had a little formal agreement to that effect. Homestake had to spend $100,000 on water testing, and to begin shaft-sinking during that period. If the money wasn't spent and Homestake backed out, then the balance of the unspent money was to be paid to Sabre-Pinon. We contracted with Utah Construction Company to do the mill construction, sink the Section 25 shafts and any other shafts that we might designate, and also contracted with them to do the water testing. This was the real thing that Homestake was worried about. Everybody worried, even the other mining companies, because American Metals had backed out of the project because of the water problems.

Chall: That was because of the water levels rather than anything else having to do with purity?

Swent: Yes. It was just handling the water and what it would do to the operation.

Chall: Yes. Well, that could certainly be a problem, couldn't it?

Swent: It was.

I might mention here that in addition to our operation, Kerr-McGee Corporation was next in line for a contract with the AEC. They're basically an oil company, although they had a small uranium mill up in Shiprock, New Mexico, and had been in the uranium business in a small way for many years--actually they had the biggest and best land position in the Ambrosia Lake area, and the best ore reserves. Phillips Petroleum Company had some lesser holdings, but still substantial ones, to the east of Kerr-McGee.

Basically our properties--Kerr-McGee and Homestake properties were more or less mixed up. We had leases from the Santa Fe

Railroad, and the Santa Fe Railroad had had every other land section in the area. Kerr-McGee got leases on the areas where the railroad had not had mineral rights.

Phillips Petroleum was next after Kerr-McGee in line for an AEC contract. The AEC more or less kept these on track. Each contract was completed and signed in the sequence of application, basically. The first one was Homestake-New Mexico Partners, then Homestake-Sapin Partners, and then the Kerr-McGee contract, and finally the Phillips contract, which was the last one in the area, for many years.

So our construction schedules were basically in that sequence. With Homestake-New Mexico Partners, we were ahead of the rest and basically had to make many decisions that affected the others in the long run. So we did try to cooperate with them, and we had many meetings to discuss such things as the power supply, and labor policies, and all sorts of common problems, the roads, the housing.

Chall: They generally assumed that you would all stay in there, that they would all get their contracts and you would all be working there?

The Need to Obtain Sufficient Water for the Mills

Swent: Yes. But the important initial thing was the water testing. Utah Construction Company drilled a number of test wells for us and then surrounded them with a series of observation holes. Then we would put a pump down into the well and pump it and observe the effect on the observation holes, which were something like 100 feet away. There were maybe four or five observation holes around each well. From this their hydrologist could calculate what the flow of water would be when we started developing the mine.

One of our problems was that we wanted to be assured of a water supply for the mills. The mill site location was very sensitive to a source of water. The Utah hydrologists came up with a prediction of tremendous amounts of water to be produced by the mine. I think they came up with the maximum of something like 10,000 gallons per minute. Yet they wouldn't guarantee that this was enough to run the mill on. We wanted something on the order of 700 or 800 gallons a minute to start the mills up on. We figured that would decline after the operation got going, that the water demand would decline to something on the order of a half of that, which was a fraction of what they said the mines would produce. But they said that we would probably eventually drain the aquifer

in the Ambrosia Lake area and that the production of water at the high initial rate would fall off.

Chall: Was that a concern? I mean, nowadays environmentalists are concerned about depleting the aquifers. Was the company concerned about that in terms of just continuing its business, how long you could work the mill?

Swent: Well, we were somewhat concerned about the ranchers who had wells, that we not dry their wells up. But that did not become a problem.

Chall: Were the ranchers concerned? Did they understand what this might mean?

Swent: They were concerned, a little bit. But they had an offset to their concern. As I said before, the Santa Fe Railroad had the underlying mineral rights. They had sold off the surface rights. Then, when uranium was discovered, they went back and negotiated a royalty agreement with the landowners who had the surface rights. You see, under the Mining Act, a mining company has the right to enter someone's property to mine. But they have to pay that person damages.

So what the railroad did was they negotiated a royalty in lieu of the damages. In other words, they gave a royalty of one-and-a-half percent of the value of the ore produced, as it was produced or would be produced, to the landowner in lieu of any damages. That was to cover all damages. This was very generous, and it turned out to be very profitable for the ranchers. So they didn't care too much whether their stock wells were dried up or not. And we made water available to them. We had it running down in ditches and everything else. So that was no problem.

Chall: The problem was then getting enough water for the mills, not having too much in the mine?

Swent: Right. Actually, before I got involved in it, Dick Stoehr and Paul Henshaw, who had negotiated these two agreements, had also had some agreements with local ranchers down in Valencia County. I might add here, the mines were located in McKinley County. Grants itself was located in Valencia County. They negotiated with some of the agricultural people in the Bluewater-Grants area, where the carrots had been growing for years, and negotiated with them for water rights. There was a dam in the Zuni Mountains called the Bluewater Dam and a little lake behind there called Bluewater Lake, which was owned by the Bluewater Toltec Irrigation District. They would, on occasion, if there wasn't enough rainfall, open the gates on the dam and allow water to run down a ditch to the agricultural area.

In addition, the state engineer had declared an underground water basin in this area.

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The state engineer had designated an underground water basin in the Bluewater area also. Actually, if you had water rights in the Bluewater Toltec Irrigation District, then you had the right to drill a well and appropriate water from the irrigation district. If you did not have surface water rights, then you could not drill for underground water in that basin. Now, you could drill for underground water out in Ambrosia Lake, because that was not part of the basin. But you couldn't in the Grants-Bluewater area.

We had purchased surface water rights, but these were agricultural water rights. Under the state law they had to be converted to industrial usage water rights. This required public hearings and that sort of thing. Initially, when we put this up for hearing, the Anaconda Company which was already there and had an operation going, opposed it. They didn't openly oppose it. They didn't appear as Anaconda at the hearings. But they had done the same thing. They had acquired underground water rights and had made some arrangements with farmers there to provide them water. So they stirred some of these people up to protest.

Chall: They didn't want you in on it?

Swent: No, they were trying to keep us out.

Chall: I see.

Swent: This didn't work. The protests weren't apparently strong enough and our conversions to industrial usage were approved. But one of the requirements of the New Mexico water laws is that the rights be used at least once in every four years. So actually we found when we got all through with it, that the amount of water rights that we had acquired were far in excess of what we needed for the mills. But they were very valuable assets, and we didn't want to sell them. So we didn't convert all of them to industrial usage. We only converted really as much as we finally needed, and then the rest stayed in the agricultural classification. We had to farm them. In our second or third year there we went in for a great big agricultural operation and planted carrots and beans and potatoes and came up with a big crop of these things. But we had an early frost that year and we lost a lot of it. They were beautiful crops.

Chall: Was this agricultural land near the mill site?

Swent: Oh yes, it was quite near, right adjacent to it. I think that was about 1960 when we had to do that.

Chall: For how long?

Swent: Just one season. It had to be done once every four years. That satisfied the requirement, for four years anyway.

Anyway, once we had water rights and had approval for some of them to be converted to industrial usage, we decided to locate the mills in Valencia County. Now this was a big tug-of-war. Both counties, both McKinley County and Valencia County, wanted the mills in their counties because of the property tax base. One of the reasons we were somewhat influenced to put the mills in Valencia County was that Grants was the place where employees would live. That's where the schools would be, and that's the place that was going to be impacted by the influx of people. We thought properly the tax base should be there. Of course, McKinley County would get their taxes on the mines anyway. There was no way of avoiding that or changing it.

Chall: Let me ask a question. You went before, was it the state or the two counties, with respect to getting the water rights?

Swent: It was the state.

Chall: Did you try to get these water rights in both counties, without knowing exactly where you were going to put your mill at that time?

Swent: No, the agricultural rights that we had purchased were all in Valencia County. There was no agricultural district out in McKinley County.

Chall: I see.

Swent: And the Bluewater-Toltec groundwater basin was in Valencia County.

Chall: So you were dealing with the--

Swent: That had been established by the state engineer, so we dealt with the state engineer and his office.

Chall: So you knew all the time that you were going to put your mill in Valencia County, you just didn't know exactly what site?

Swent: Well, we did give some consideration to putting it in McKinley County, but we just never could get any assurance from the hydrologist of Utah Construction that there would be enough water out there. Now actually, Kerr-McGee and Phillips did locate out

there. But they had to drill very deep wells. They again did not rely on the water from the ore horizon, which was the Westwater Sandstone (or the Westwater Canyon Sandstone, the actual technical name of it). They drilled deep wells down into the Todilto or deeper than that, the limestone, and tested those wells. But they had more time. We didn't have enough time to do it.

By testing those deep wells--and I'm talking 2,000-2,500 feet of depth--they were able to come up with enough water. Of course, when they got into operation they used their mine water and just supplemented with the deep well water. But they had more time to make this decision. Again, the county politics came into play. But the saving that a company had was in the haulage. We had to haul our ore an average of sixteen miles by road, and they were able to keep their haulage costs down just to two or three miles, depending on the mine.

Chall: It all figures in, doesn't it?

Swent: Yes. We selected shaft site areas for Sections 25 and 23, pretty close to those that I had used in the feasibility study that we originally did. These were based on the idea--Ab's basic idea that we would sink a shaft in the lowest portion of each section in order to get underneath the ore. Then we would drive haulage levels out from the shafts, underneath the ore, and then raise up into the ore and then try to drain it, and develop in that fashion.

There was a school of thought, and Kerr-McGee and Phillips adopted this particular approach, of sinking the shaft near the ore and then developing in the ore horizon itself, right from the shaft. This turned out to be a disaster, and in the long run both companies changed over to our system. But they lost several million dollars in so doing. It was a very costly error. Ab's approach was certainly the right one.

The Value of Former Mining Experience

Swent: This is an interesting speculation here, but basically Homestake was a mining company and had mining people all the way through its structure, all the way up to the board. Kerr-McGee and Phillips Petroleum were really oil companies. Kerr-McGee did have some mining experience in uranium up in the northeast corner of Arizona. But they did not have a mining organization. They did not have any depth of mining people. So that when they started to put together a mining organization, basically they were in the hands of whoever they hired.

For instance, Phillips Petroleum Company hired a fellow named Ray Jenkins to develop their mines. He had been involved in potash mining, which is developed in the horizon. That's exactly the way it's done. He thought it could be done again in the uranium business. Kerr-McGee hired as their mine superintendent a man named Richard Moe. He had come from White Pine, Michigan, where there was a big copper mine. They also had developed in the horizon. So those people thought that was the logical way to do it, because that's what they had done before. They had managers over them, but the managers had no more experience than they did. It was a question of complete lack of experience in the industry. Homestake did have a big advantage there.

Chall: I guess I'll find out later what happened to Kerr-McGee and Phillips. Did they stay in the business there?

Swent: Phillips did not. Kerr-McGee did. This decision to develop under the ore bed and to raise up into the ore from below was very basic and led to complete differences in equipment that we ordered. We had decided to go with rail haulage in the underground haulage levels, below the ore horizon. Kerr-McGee and Phillips decided to use coal mining equipment, which again was a big disaster. They eventually went to rail haulage, but after several years.

Chall: Did they come and see how you were working in the mines? Was there that kind of cooperation?

Swent: Oh yes, we had lots and lots of visits between mines. We all kept up with each other's activities and thoughts.

Chall: They didn't have to employ spies?

Establishing Top Management Personnel

Swent: No, no. We were all pretty cooperative in that respect. As things got going in early '57, as I mentioned before, Dick Stoehr was really basically the first employee there. In fact, he was there before I was, because he had been involved in negotiating the agreements. Then he was getting started with making arrangements to sink the Section 32 shaft.

The way we organized was to have Dick Stoehr in charge of the mining for Homestake-New Mexico Partners. Also he was in charge of the exploration and any land acquisition we might acquire as the source of 150 tons a day for the New Mexico Partners mill. Clyde Osborne, who was one of the limited partners in Homestake-New

Mexico Partners, was designated to be the mill superintendent for Homestake-New Mexico Partners. They contracted with Western Knapp Engineering of San Francisco to design and build the Homestake-New Mexico Partners mill. So he went and stayed several months in San Francisco while the mill was being designed. Well, they would make occasional trips back to Grants to get data and fill me in on what was going on.

On the Homestake-Sapin Partners side, Don Delicate was to be the mine superintendent. But he didn't really move down from Utah until June. He came down in May for a short visit, but he waited to make the move until things had been firmed up with Sabre-Pinon. Eugene Allen, who had been working with Sabre-Pinon and American Metals and was a metallurgist involved in negotiating the AEC contract, was designated then to be the mill superintendent for Homestake-Sapin Partners. He went to San Francisco also to work with Utah Construction Company to design the Homestake-Sapin Partners mill. Dick Stoehr brought down from Utah an ex-Homestake employee named Dean "Red" Crossland--Red is his nickname--and made him the mine foreman at Section 32 for watching the shaft-sinking and then to be mine foreman when the shaft was finished.

A little personal aside here--in early May of '57, before we had actually made our commitment with Sabre-Pinon, my wife Lee came down for a visit. She had not been down before. She was seven months pregnant at the point, but I wanted her to see the area and what we would be moving into. I drove her out to Ambrosia Lake and in that area the roads were terrible. In her condition, of course, we had to drive very, very slowly. It took a lot longer than I had anticipated because of that. Then in late May, over the Memorial Day weekend, I flew up to Lead. We packed up a few things in a U-Haul trailer and drove back down with the kids--we had three children at that point--and young Hector Escutia--to Grants. We drove down through Moab and La Sal so that Lee and the children could see the beauty of this country and where the Homestake mines in Utah were. In Grants we moved into a small house (a little under 1,000 square feet) that the company had purchased in Grants proper, on First Street. In a day or so Hector Escutia left by bus for Tucson, Arizona, from where he could fly back to Mazatlan.

In early June or in late May--I think the Homestake board met in early June--at its regular meeting it acted on the Homestake-Sapin Partners agreement and gave the officers of the company the right to go ahead with the project if they were satisfied with it. Actually, they waited. They wanted to see the progress in the Section 32 shaft.

The timing was very close. By the end of June we had gotten down into the Westwater formation and had penetrated some thirty or

forty feet. The formation is maybe, I think 150-170 feet in thickness. But we had gone down several tens of feet into it by the end of the month. So in the very last few days of the month Ab Shoemaker and Donald McLaughlin, Ira Joralemon, and my dad came down together to have a look at it.

We took them down in the shaft in a bucket. I remember we didn't have a cage yet. We were still sinking. They examined the walls. They were dripping wet, of course; the water was running down them. It was wet enough that they had to have slickers on. The big decision was whether the ground would hold up. The question was whether you could hold this ground open when it was so wet. It was very soft sandstone. There are exceedingly soft formations underground sometimes, even to the extent of being noncohesive if they have enough water in them.

Anyway, one of the things that we had done was to take cores from drill holes and take them out of the ground immediately and test them for their compressive and tensile strength and then allow them to dry for a period and then test them again. We did find by this means that the strength increased almost 80 percent, 80-100 percent with about a two or three months drying period. So this gave us a little more confidence that the ground would hold up. And eventually it did hold. It was touchy. The ground support was a problem all the time.

Chall: What did that mean if you had to have a time-lag of several months in order to dry out? Did you have to wait then to dry out the underground before you could mine into it or sink shafts?

Swent: Well, not the shaft-sinking. When we were doing shaft-sinking we had to just take the bull by the horns and sink through the water and provide pumps to pump it out as it accumulated in the bottom of the shaft. It made for very messy shaft-sinking. The muck that came out of the bottom wasn't rock. It was mud, in essence. It was a slurry almost. So it was not too difficult to shovel out.

Chall: Was there a waiting period then? You said that when you tested cores, when they were dry for several months, they were strong.

Swent: Well, they weren't strong, but they were stronger.

Chall: Stronger, yes. So did you feel that you had to wait?

Swent: Well, this more or less confirmed Ab's approach of developing the ore by draining it, by going underneath it with the haulage drifts and inducing the water to drain out into the haulage drifts. In fact, what we did when we actually developed these drifts, was to

set up drills and drill holes from the haulage drifts up into the ore and induce more drainage.

Chall: The water that you pumped out went to the surface?

Swent: Yes. There were some drainage creeks there and we piped it over to the drainage creek and then let it go. We had one minor problem with a rancher named Buck Wilcoxson. He had a dwelling downstream of us, and he was the surface landowner of Section 15. And he had his dwelling on another section which was not one of those we had a lease on. He objected mildly because the increase of water in that stream made it difficult for him to cross the stream to get to his house. So I had Don Delicate immediately go down along with a bulldozer and build a good substantial crossing with a culvert so that he would have no cause for complaint. This was one of the better PR moves we ever made.

Buck Wilcoxson was a real character. He had served time in the federal penitentiary for killing cattle that belonged to other people and had wandered onto his ground. He had warned the people about it and they kept coming over. All these ranchers were very unscrupulous on this. The cattle kept wandering over onto his land, so one day he just cut the tongues out of the cattle, and most of them died. Anyway, he had been in prison for that. He was a very tough character in many ways. But we had good relations with him.

I mentioned, I think, some of the labor troubles in the early days there. One thing happened with one of the companies--a little company there called West Vaco. It was a subsidiary of Food Machinery Corporation of San Jose, California, and was run by a competent mining fellow named Robert Kirchmann. But they got into some labor problems. They had just a few employees and it was a dry operation.

Chall: What were they doing?

Swent: They were mining sandstone ore, but above the water table.

Chall: For uranium?

Swent: Uranium, yes.

Chall: I just couldn't imagine what the Food Machinery Company was doing there.

Swent: They got into this as a sideline, I guess. They got into some labor problems and had a real hassle and had unfair labor practices leveled against them. But they finally did have an election in, I

forget, late '57 or early '58. They only had about fifteen or twenty employees anyway. After all the hassle that they'd had, they went no union by a small margin, which was an interesting development.

Moving the Family to Grants

Swent: On July 20, 1957, I took a little vacation and left Grants. Lee was just about ready to deliver our fourth child. She wanted to go back to Denver, where she had had the previous child and use the same doctor. So on July 20 we left and drove to Denver.

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We were only there a day or so. On July 25 she went to the hospital and had our daughter Jeannette. The day after, on the twenty-sixth or so, I drove on up to Lead and got another U-Haul trailer and another load of household things and drove back down to Denver and then picked up the other three children--no, I think I picked up two of them--and drove down to Albuquerque. She was to fly down and meet me there that evening. The plane showed up and she wasn't on it. I didn't know what to do. I tried some phone calls. Finally I called back to the house where she had been. She was still in it, and her mother and father had been down to help us. They had been getting into the car to leave when he had a sudden illness and had to be hospitalized. So she had canceled her trip and stayed there for a day or so. Anyway, she came down two or three days later.

Chall: You all moved into the little house?

Swent: We moved into a bigger house on Second Street. Now that the decision about Homestake had been made, the company bought a larger house. On the housing business, we bought about seven or eight existing houses and just took on the mortgages. We bought people's equity. We had to pay premiums to buy their equity out, but we needed the housing desperately. I never begrudged the money. We would negotiate on them. So we moved into a three-bedroom house. But they were all pretty small bedrooms.

Chall: That was a very small and older one that you had been living in.

Swent: Yes, but these were fairly new houses. This was in a new development and the equities were fairly low. This was called the Carder-Eden development, and it had about, I don't know, fifty or sixty houses in it that were fairly new. They had been built maybe

five years before. The rest of our personal effects we had stored in Lead in a Homestake warehouse for a while until we had room for them.

The Central Office

Swent: Originally the first offices we had were in Grants itself on Santa Fe Avenue, which was Highway 66, going through Grants. Being the main highway, no stoplights on it were permitted. The traffic on it in the summertime was just terrific. It was hard to get across the street, even. As the uranium boom came along it got even worse. We had terrific traffic jams there in the evenings. The offices were in an old store which was glass-fronted. There was this great big room with maybe one or two rooms behind. It really wasn't very adequate. It was all right while we were doing exploration and preliminary work, but now we had more than that.

So Dick Stoehr located a building being built in Milan, and found who was building it. A fellow was building it strictly on speculation, but it was an office building, a fairly substantial one-story. So he arranged to rent that as soon as it was finished. We moved out there in two or three months. It was just a concrete block building with a slab floor--nothing fancy. But it was adequate and did us for about a year before we built our own offices at the mill sites.[1]

At this point one of the employees that we got was George Snyder. He was hired as an office manager by John Hamilton, the Homestake treasurer in San Francisco. George had lots of uranium experience. He was an old-timer in the uranium area. He had worked up in the Marysville district, I think, for VCA, Vanadium Corporation of America, for one of the real old-timers in the business named Denny Viles, and later for Page Edwards, who was the geologist that had worked at Triumph Mining Company up in Hailey, Idaho, whom I had known back in 1941. George was not an accountant, but he was an excellent office manager.

His wife was Claramay Snyder, and she was a personnel officer for Kerr-McGee at the Shiprock Mill. They had brought her down to work in--or they had agreed to take her on in Grants when George moved there to work for us. But she apparently wasn't too happy with them, and George asked if I would take her on as our personnel director. I agreed to do that, and this is one of the best

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[1]See page 402 for continuation of building company offices.

decisions I ever made. She was a real jewel. She was just excellent. She loved the work, and had a very good personality and was very good at choosing and screening employees. She was very conscientious at checking on them and getting their backgrounds.

One of the things we wanted to guard against was employing any real red-hot union people that would turn out to be union organizers in disguise. And she was very good at that. The workers all just thought the world of her. They would take all their problems to her. In fact, she was called Mama Snyder.

Chall: Did she have a small staff?

Establishing Medical Facilities and Insurance

Swent: Yes, as our work force built up, she had to have help, of course. She wound up with, I've forgotten, two or three assistants to help her. One of the things that we instituted--in our benefits program we wanted to do something similar to the hospital and medical care that was provided in Lead.

But there was no hospital in Grants at the time, and we didn't want to build up--there are certain disadvantages to having a medical staff. We didn't want to build up a medical staff. So what we did was to institute a medical insurance program. We instituted a major medical plan.

This was early in the days of medical insurance. We had the major medical insurance for employees and their families. We did charge the employees a nominal amount, I think $5 a month for a single man and $7.50 or $10 or something like that for a man with a family. The first carrier that we had was New England Mutual Insurance Company. The claims all had to be sent back to them. But Clara would review the claims first and help the people make them out and then send them in for payment. It worked fairly well, and eventually we worked up to where we were processing the claims ourselves. Claramay and her staff could handle them. New England Mutual gave her check-signing authority, and we just processed the claims ourselves and sent finished claims back to New England Mutual.

Chall: What happened if there were accidents? Did you have a first-aid station or something closeby?

Swent: This was one of the major problems that we had to work on. The question of a hospital was one of them and the question of doctors

was another problem. There weren't really very many good doctors in Grants. I think at the time there were four doctors in Grants. There was Dr. Fjord who was an osteopath, but a very conscientious individual. I always thought very well of Dr. Fjord. There was a Dr. Greco who was an M.D., but nobody thought too much of him. There was a Dr. Gutierrez, who was a younger man. (Dr. Greco was fairly old.) There was a Dr. Basil Wang, who was of Chinese origin and was the doctor for Anaconda.

Anaconda had built a little clinic of their own and had Dr. Wang running it. They had, I think, twelve beds. That was basically for their own employees. But they did make Dr. Wang available to take care of emergency cases and that sort of thing, and let emergency cases stay in their clinic. Initially we used Dr. Gutierrez to do pre-employment physicals for our employees. But we didn't really have very many employees at the time. Most of the employees were those of the contractors.

In the meantime one of the San Francisco people who was in charge of insurance, name of Harry Anderson, came down. We worked with Kerr-McGee and Phillips. Phillips Petroleum, particularly, had a major medical department. It was headed up by a Dr. Kieffer Davis. I'm not sure where our first contact came, but we eventually were contacted by a Dr. Matthew Connell, who had run an occupational medicine clinic in the tri-state area of Oklahoma, Kansas, and Missouri, where there was a lot of lead zinc mining. A very extensive, very historic mining area in the United States. This area had gradually gone into a decline, had been mined out. And he was looking for a new location.

He came out and we interviewed him. Harry Anderson came out, and the Kerr-McGee people came out and the Phillips people came out. We had a big session and interviews with Matt Connell, and eventually came to an agreement with him to move to Grants and set up a clinic. He chose the name Grants Clinic. The arrangement was that we would send all our industrial cases to the Grants Clinic, he would have other doctors with him. Then our other employees who had insurance would be free to go where they wanted to, but he was also free to treat them. He wouldn't be restricted to just occupational medicine.

Chall: That would be a fee-for-service?

Swent: We arranged that we would pay him a fee for the services under the insurance. This was an arrangement with the insurance company. We used something that had been developed in California called the Relative Value Study. This was a long, long listing of all sorts of medical procedures and diagnoses, with a relative value to them. Then we set the base fee at a fixed figure and used the relative

value study to determine the exact fee for each thing that he did. This was also to be the basis for the occupational medicine charges.

In the long run this worked out pretty well. We did have a few cases of people who objected--injury cases, where they objected to going to the Grants Clinic, but not very many. We had one very significant one that I intervened in personally. I talked with the man and even let him have another doctor as a consultant. But basically we tried to control the medical costs by having the injury cases go through our own doctors, who had plenty of experience. They were competent doctors. There was no question about their being shorted on medical care or anything like this.

Chall: If they didn't go to the clinic, where would they go?

Swent: Well, there were other doctors who came in as the town grew. One of the thorns in our side was a Dr. Denzer, who had a very nice personality. But he just made a specialist case out of everything. He did very little himself; he just referred everybody to specialists and made great big cases out of them. But he was very sympathetic and he gave a very good appearance to people. They all liked him basically. If he said, "You need this and that specialist," why, they believed him, and off they went. The Grants Clinic tried to control the use of specialists and did as much as they could themselves.

Matt Connell couldn't come immediately himself, but he sent over a Dr. Norton Ritter to start doing the pre-employment physicals. They just rented a little home in Grants and started doing the physicals in this house. Later they built a substantial clinic building in a new development in town. It was fairly large-sized. They had their own x-ray and little operating tables for minor surgery and things of that nature. But at first they just worked out of a home, did the exams out of the home.[1]

We didn't really know how these physical exams were going to work. They had their own forms that they had used back in Picher, Oklahoma. They would fill these out and then send them to us. We were to make the decision on whether we hired a man or not.

Chall: These were for mill workers and miners?

Swent: All the employees. We would look at these forms, and we didn't know what to do about them. So finally we got them to set up a grading system. They would grade them on a one-through-five basis:

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[1]See pages 414-419 for discussion on building the hospital in Grants.

number one, being a person with no physical defects, and number five, being completely unemployable. The twos, threes, and fours were intermediate stages.

Hiring the Miners

Swent: Both Dick Stoehr and Don Delicate had worked in Utah and hired uranium miners up there. They valued experienced miners and knew what experience was. When these forms began coming back from the doctors as we tried to build up our mining forces, we found that if you stayed with those rated number one, you got no experience. The men were all young people in their late teens and early twenties, and they had no mining experience. If you wanted to get someone with experience, you had to take some who didn't meet the rigid physical requirements of a number one. So finally I agreed that we would hire through number three--ones, twos, and threes. This again turned out to be a very good decision, because we did get many experienced miners that way. The other companies, Phillips and Kerr-McGee, stayed with number ones, and they had a terrible time building up an experienced force. I don't know if they later changed. They must have, because they developed some experienced miners. But they had a terrible time at first. But we got experienced men almost from the beginning.

Chall: Had some of them come from the other mines?

Swent: Yes. By experienced, I mean people who had mined in other mines. There were a lot of--well, we had people come from all over. We had people coming down from Utah. We had Homestake employees from Lead who had gone to Arizona. At one point, in 1957, when a big copper mine opened in San Manuel, Arizona, they were recruiting a labor force from all over the country. Oh, fifty or sixty Lead miners left and went to San Manuel. Then, in '58, they had a strike in San Manuel.

Many of these ex-Homestake people, when they were off work, during the strike, came to Grants. Some of them got jobs with us. We took them on. Some stayed; a few went back when the strike was over. But they were known quantities and experienced. Some of them I knew, remembered from Lead. One of them was a fellow that we had used for--we called him our movie star. We had used him in the movie, "Deep Gold." He stayed with us for many years, became a shift boss eventually.

Chall: In terms of experience, is there a difference in being an experienced uranium miner, an experienced gold or copper miner or

any of the other kinds of mining that you had been doing? Well, gold and uranium, specifically.

Swent: Experience in uranium mining was the best experience. There's no question about that. But a miner who had mined in gold or silver or copper could easily adapt to the uranium conditions. The big thing and the problem in the mines was the moisture, the wetness. It was just raining all the time in the mines. They had to wear slickers all the time. The broken ore or broken rock was just virtually mud. Everything was dirty and slippery and wet, just miserable working conditions.

Setting the Wage Scales

Chall: Was the pay different as a result of that?

Swent: Well, we didn't make any changes. When I first went into the district and we began to get the mining force, the first thing that we had to decide on was a wage scale. The only wage scale in the area was that of Anaconda; that is, the only mining-type scale. And their basic operation was an open pit operation. They had had a small underground mine or two, although at that time they didn't even have any employees. But on paper they had wages established for underground miners and mine employees. So we used this as a base and devised our own wage scale around it. It wasn't quite exactly the same as theirs, but the average worker would get about the same wages. This was part of our longterm labor policy, which was to try to pay good wages and keep employees happy.

Now the wages at Anaconda were established by a contract with an organization called the Uranium Metal Trades Council, which was basically a combination of AFL unions in Albuquerque who had gone together to form this council. Anaconda had been petitioned for a union by several unions after their mill had been built. The petitions were mostly by the different trades: operating engineers and carpenters and mill wrights and different types of unions. They didn't want to have a half a dozen unions to deal with, so they got them to form this Metal Trades Council and act as one union. It was in essence a little bit of a CIO arrangement. But as a result the Uranium Metal Trades Council wasn't very strongly organized. They had strong support from the AFL in Albuquerque, but the Metal Trades Council itself didn't exist anywhere else.

Anyway, we adopted that. We figured that this would at least make us competitive. But then right afterwards Kerr-McGee and Phillips came in and started establishing their wage scales.

Phillips announced that they were going to bring in their oil field wage scale. We were really upset by that because oil field wages were much higher than mining wages and we were afraid that this would--I've forgotten the details. But I think we had to raise wages at the time as a result of that, to stay competitive. I remember trying to talk Phillips out of it, and they said, "No, this is what we pay everywhere else, and we're going to pay it here."

Chall: Well, when you were describing the terrible working conditions--Of course, you have to keep the wages compatible with whatever is around in the area. But did it affect the health, being in that damp working situation for days and weeks at a time?

Radon Daughters, the Little Understood Hazard in 1958

Swent: Well, no, not really. I don't remember any problems. It was uncomfortable. But working in the slickers at least kept you warm. It was very muddy and messy. But the real hazard that there was in the underground mines was the exposure to radon daughters--an occupational hazard. Uranium, or 238U at least, is mildly radioactive. 235U is somewhat more so. Anyway, 238U decays through a chain of radioactive elements down to radium. Radium then in turn decays to a gas called radon. Radon seeps through the interstices in the rock, particularly in this porous sandstone that we had. We didn't realize it at the time, but the rate of diffusion of these molecules of radon through the porous sandstone was really very high.

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Radon has a half-life of 3.8 days, and when it decays, it decays in mid-air into a solid, and it's invisible--it's so fine, so small. It's a highly-charged particle. When radon decays it gives off alpha particles.

This first product is basically called radium A, and it has a half-life of three minutes. Then it decays into another particle called radium B, which has a half-life of twenty-seven minutes. Then that decays into a third particle called radium C, which has a half-life of twenty minutes. And finally that decays into a fourth particle called radium C prime, which has a half-life of just a fraction of a second, a very small fraction of a second. Then that decays into a relatively stable fourth substance called radium D, or lead 210.

These particles all are in the air and can be breathed in, inhaled by the people working in the mines. Radium A and radium C prime also decay by giving off alpha particles. Radium B and radium C decay by giving off beta particles, which really aren't particularly harmful. But the alpha particles are in essence like little tiny bullets in the body. Your skin will stop them. The skin is strong enough that it stops them on the external area, so there's no ill effect from external exposure to them. But if they're inhaled and the alpha particles are emitted inside the lung or in the tracheo-bronchial tree, eventually they can cause lung cancer.

This was basically not too well-appreciated in 1957 and 1958. It was known, but nobody knew what limits there should be on exposure and this sort of thing. Our insurance company--Traveler's Insurance Company--as a workman's compensation carrier under New Mexico law, would come in and do a little bit of testing for radon daughters. At that time the instruments for measuring it were very crude. The hazard was known but it was not appreciated at what level of exposure it was hazardous.

Back in Europe, in Germany and Czechoslovakia, in uranium mines there, there had been a history of great epidemics of lung cancer. Eventually this was traced to the radon daughters. At first it was thought it was the radon that caused it. Lots of calculations were done on the radioactivity of radon. Nobody could understand why it would cause lung cancer, because the theoretical calculations showed that the amount of dosage really wasn't that great.

They thought maybe there were other elements that caused it. There was exposure to arsenic, and arsenic has sometimes been thought to be a carcinogen. I've had a lot of experience with that and it's my feeling that arsenic trioxide probably is carcinogenic, but you don't find arsenic in nature in that form. We find it in arsenopyrite, an arsenic sulphide which is a very common mineral, but that is extremely stable. We have it in the gold mine in Lead, and it's extremely stable. It does not break down to arsenic trioxide. There are other minerals, like enargite, which do break down under drilling and mining operations and form arsenic trioxide.

Workers in Butte, Montana, told me that when they came out of working in some of the Butte mines where they had enargite and if they had been wearing a respirator because of the dust, that they would come off work with a white ring around their mouths where the respirator had been. This was arsenic trioxide. It's white. Smelters that have arsenic minerals present create arsenic trioxide, and they have health problems in their pyrometallurgical

departments, but not in the areas where the concentrates are received. The arsenic is still usually in the form of arsenopyrite.

The thought was that, well, this European experience might have been colored by other carcinogens as well as the radon and radon daughters. So the United States Public Health Service in 1950, when uranium first began being mined in the U.S., began a study of this element, of uranium miners, to see what levels of exposure should be and whether there was really a correlation between exposure to radon daughters and lung cancer. But it takes many years to develop this lung cancer, anywhere from twenty to forty years, so it's a longterm study. Some of the results began coming out in about 1960 or so, preliminary results. But not enough to indicate what levels of exposure should be.

This was known to be a hazard but we didn't know what controls should be had, at what levels we should control it to. So that was the primary thing. The moisture worked with us as far as silicosis goes. The moisture settled all dust. There were no dust problems at all.

Chall: We've gotten a little bit afield. We were going to talk about medicine today.

Swent: Well, yes. Maybe we'd better lay off there today.

Chall: Yes. So we'll just go on next week.

More on Central Office, Personnel Policies

[Date of Interview: December 30, 1987] ##

Indian and Spanish American Employees

Swent: During our last interview we were talking about Claramay Snyder, who came to work for us as the personnel director. She had had some experience in personnel work in the uranium industry with Kerr-McGee Corporation, who had a small uranium mill at Shiprock, New Mexico, and purchased ores. They did some mining of ores also over in the Lukachukai Mountains, which are across the line into Arizona on the Navajo reservation. Most of the employees were Navajos. She had quite a bit of experience with handling them. Navajos are a real problem, because they change their names

frequently. I'm not really quite sure what the cultural background of that is, but they take the names of people they admire or think highly of. Marion Bolton was the manager there, and Claramay Snyder was doing personnel work. They were both well liked by the Navajos. There turned out to be quite a few Claramay Begays and Marion Begays and Bolton Begays.

Chall: Is that so? That's the first name, but did they all change their last names, too?

Swent: Sometimes they would change their entire name. Keeping track of them was just something terrible. The social security number business was terrible, too. We didn't hire many Navajos. We weren't that close to the reservation. We were about sixty miles from Gallup, which has a lot of Navajos around it. We did deal with some later on, but generally they weren't interested in working underground. We hired more Acomas and Lagunas than any other Indians.

One of the interesting things on the medical insurance plan that we set up--Claramay, after her experience with the Indians,decided that the use of Indian doctors--some call them medicine men, others call them witch doctors and that sort of thing--was justified. The Navajos have a very elaborate tribal setup for treating illnesses. Anyway, she thought this did them just as much good as sending them to a conventional M.D. and convinced the insurance company to pay for visits to medicine men. I noticed in the Wall Street Journal here last week there was an article about some company that is claiming to be the first to have ever done this. We were doing it thirty years ago.

Chall: Dr. Brimhall [George Brimhall, Department of Geology and Geophysics] told me that there was a group of Indians in the Grants area called Paguate. Did I get that correct?

Swent: Paguate?

Chall: Yes.

Swent: They were east, over near Laguna, residents of a town called Paguate. I never heard them described as a separate tribe of Indians, really. I think the town of Paguate is on the Laguna Reservation and they would be considered to be Lagunas. Anaconda had a big ore body that they discovered over there called the Paguate ore body, that they mined as an open pit mine after the Jackpile Mine. The Jackpile was right on the Laguna Reservation. The Paguate was four or five miles away, not very far away, and still on the Laguna Reservation. Basically I don't think they were different Indians. I think they were Laguna Indians. Now the

Laguna Indians are sort of a nineteenth-century Indian mixture. They're not a real classic, pure-blooded tribe that's come down from pre-Columbian days.

[Tape interruption]

Swent: There were residents of Cubero that we knew named Gottlieb. [laughs] And they were half-Indian, but they were also half-German.

Chall: But you did work with Indians?

Swent: Yes. We hired some. The Indians were not a major part of our work force. Mostly we'd hired the Pueblo Indians rather than the Navajos. They made very good maintenance people and were very regular in attendance and that sort of thing. But most of them didn't like to work underground. We had very few underground.

Chall: I understand that many of the bridge companies hire Indians because they are willing to work on heights. Except for maintenance, did they work in the mills at all?

Swent: Yes. I remember we had a Hopi named Yellowknife in the mill. That's the only one I happen to remember personally.

Chall: What about Mexicans?

Swent: Oh, lots of those. Of course, in those days we didn't have the ban on employing illegal immigrants. I'm sure that we had lots of wetbacks employed. I remember talking with some who had worked in mines in Mexico. We never knew whether they were legal in the country or not.

Chall: I see.

Swent: But we had lots of Spanish-Americans. That's what they're called there. They don't call them Mexicans.

It's very hard to distinguish by sight between a Spanish-American who was raised in New Mexico and a real Mexican. They all speak Spanish. If you pry into their speech a little bit you can tell them apart, but on the surface by name and looks, you can't. If you go into the speech a little bit you usually can, because the New Mexican Spanish is greatly changed from Mexican Spanish. I call it New Mexican-ese. They've adopted a lot of English words and phraseology and even English word order into the Spanish that they speak. If you listen to them speaking to one another you can hear these words. If you listen you can tell whether they were raised there or not.

I had an interesting experience with Hector Escutia when I took him to the bus station to buy his ticket to Tucson. He had come to stay with us for the express purpose of learning English, but he had a very difficult time with English and didn't know as much as the Cordova boys did. At the bus station he tried to buy his ticket himself, speaking Mexican Spanish. The clerk answered him in New Mexicanese and Hector couldn't understand him. Afterwards, he complained to me that the clerk spoke terrible Spanish and he couldn't understand it. I laughed and told Hector that the problem was that Hector hadn't learned enough English to understand New Mexicanese!

Chall: Did you need to use your Spanish much?

Swent: Not really. I used it some. Knowing both English and Spanish allowed me to understand both types of Spanish. It was a great aid sometimes, particularly in the political field. We got into politics in great depth while we were there, and it was of help there. But basically, at the level I was dealing in at work, I didn't have to do much in the way of Spanish.

Chall: Okay, we can go on. We digressed a bit on the personnel.

Swent: Yes. I was going to sort of describe the different problems that we had to solve and go through each one by itself, rather than jumping back and forth between them.

Chall: Yes. Why don't I just let you go right on then.

Providing Electrical Power for Mines and Mills

Swent: The next one that I had listed to go ahead with was the question of electrical power for the mines and mills. The only power in the area at the time we went there was REA (Rural Electrification Administration) power, sold by the Continental Divide Electric Cooperative, which was headquartered in Grants and served the surrounding area there. They had a small transmission line from a power plant on the Rio Grande, just north of Albuquerque. But they didn't have the capacity to supply what our demands would be. Anaconda, which was served by them, used REA power, but also had installed some diesel engines to supplement it because they had had some disastrous interruptions.

There are problems in a mill when you have a sudden interruption of power. In mills handling lots of slurries, which are mixtures of solids and liquids--usually solutions with ground-

up ore in them--if the power stops, the motion of the machinery stops and the sands in these slurries tend to settle out. If the power interruption is long enough, the sand settles down and then you can't get the machinery started when the power resumes and you have a terrible time. So Anaconda had installed some emergency diesel engines to tide them over REA power outages.

The Public Service Company of New Mexico had the generating capacity, but it was all in the Rio Grande valley, eighty miles away. They had no lines out into the area and the time that it would take them to build lines was too long for us. We were going to need power long before they could get a line into the area. We held many intercompany meetings because Phillips and Kerr-McGee also had demands. Anaconda was interested in being able to do away with their generating capacity. So all four of us would meet with representatives of Public Service and with representatives of the REA. We also dealt with General Motors Electromotive Division.

We were the lead company. We were the first ones to need power, and we had many months lead over the others. So this was a disadvantage in some ways. The others could wait for the Public Service Company to build a line; we couldn't.

Cedric Gust, the chief electrical engineer at Lead, came down to Grants to review the situation. All our major decisions were his recommendations. When time came to do actual installations, he sent down his assistant, Rex Tario, for many months. Both Cedric and Rex gave me excellent advice and were of great help. To be our staff electrical engineer during operation Cedric recommended Elmer Shields from the Lead staff, so he moved to Grants.

Cedric Gust finally decided we should generate our own power to begin with, which meant building a fairly substantial power house.

For the Homestake-New Mexico Partners mine on Section 32, for the power at that mine, we brought a 500-kilowatt General Motors Electromotive Division, trailer-mounted diesel. This was straight diesel, because we needed it immediately. Straight diesel is fairly expensive power. We put that at Section 32 until permanent power could come in.

Chall: Which was how long?

Swent: Oh, it was well over a year. We had three mines we were developing for Homestake-Sapin Partners. They were called Sections 15, 23, and 25. They were one-mile squares of land, touching at the southwest-northeast corners, forming a steplike pattern on a map. So we decided to use 23, which was the center one, as our

headquarters. We set up a powerhouse there. It was powered by two 1,000-kilowatt General Motors Electromotive Division dual-fuel engines.

A dual-fuel engine is basically a diesel engine which has had the top of the pistons reshaped to accommodate the use of natural gas along with diesel fuel. Natural gas itself will not explode on compression. So a little diesel fuel has to be inserted. The diesel fuel does explode, and once it explodes it ignites the natural gas. So the amount of diesel fuel used is very small. At that time, natural gas was very cheap. This was a fairly cheap source of power.

So we put in the two 1,000-kw engine there. We obtained a 500-kilowatt mobile unit, similar to the Section 32 unit except that it was dual fuel, to put down at Section 25 as an emergency unit in case of a failure at Section 23. Because Section 25 was going to have the most water of all the mines. Of course, it took a long time to obtain and install these. In the meantime we had to get along with temporary portable diesel generators that the contractors provided.

Then down at the mills we had decided to put in a joint powerhouse for the two mills. We brought six of these 1,000-kilowatt Electromotive Division dual-fuel engines and located the power house right on the property line so that three of the engines were Homestake-New Mexico Partners engines and were on the Homestake-New Mexico Partners property; three of the engines were Homestake-Sapin Partners engines and were on the Homestake-Sapin Partners side of the line. But when it came to operating, when it was finally finished and we needed operators, we had just one operator for the whole powerhouse. This gave us some savings in operating costs, rather than having two powerhouses and two sets of operators.

To go further into the natural gas supply--very fortunately Southern Union Gas Company, which is a major southwest gas company, had a thirty-inch diameter high pressure pipeline--that meant that was 600 pounds per square inch of pressure--going to Los Angeles, which went by about two miles south of our mill sites. So we arranged for them to tap this line and put on a pressure reducer and bring up a line to the mill sites and to provide a tap to each mill. We also arranged for them to extend the line on out to Ambrosia Lake following the road, so that we would have natural gas there to operate the engines that we were putting in there. I had to go down to Dallas to negotiate this contract with them, and it all went fairly routinely. There was really no problem, and they went ahead and built it. We had to pay for the line, of course, and they did the installation.

Chall: Was this dual-fuel engine fairly common, or did you develop something new?

Swent: No. It's something that General Motors had developed. The engines, these 1,000-kw ones, are basically the units that are commonly used on railroad engines. The railroad engines are made up of multiples of these 1,000-kw engines. Except those are straight diesel. But they had developed the different cupping on the pistons for the natural gas application.

The two mills were to be built side by side with just the property line, a fence down between the two of them. With the tremendous amount of time pressure that we had on this, there was no legal way to consolidate the mills. From an economic point of view, it would have been much better to build one bigger mill than the two smaller mills. The Homestake-New Mexico Partners mill was to be nominally 750 tons a day. This was the contract with the AEC. The Homestake-Sapin Partners one was to be 1,500 tons a day nominal capacity. Actually when they were built the New Mexico Partners mill was able to do up to 900-950 tons-per-day, and the Sapin one was able to do about 1,700-1,750 tons-per-day.

Chall: You built it with more capacity, knowing that--?

Swent: Well, you almost always overdesign equipment. The worst mistake you could make is to underdesign. You choose your various components by capacity, but you never really know what the true capacity is. There's a lot of catalogue figures and design figures and things, but you're never really sure that they'll do what you think they'll do. You decide on the basis of small samples. So the tendency is always to overdesign for larger capacity than the capacity you really have to have.

The capacity that you want is basically a function of the grade of ore also. If the grade of ore turns out to be lower than you expected, then you need some additional capacity to get the same total yield. So this was the idea behind it. The AEC contracts provided for a certain schedule of delivery of yellow cake; it wasn't an open market. If you had a larger capacity mill, it didn't mean you could sell the extra production. But if your grade of ore turned out to be lower than you expected, why, you could at least make your shipment schedule.

Building Roads

Swent: When we first went down there, in the matter of roads, U.S. Highway 66 ran right through Grants, right through Milan, and then went up, followed the Santa Fe Railroad tracks up between Anaconda and Bluewater Village and on out to Gallup. However, at the western end of Milan there was a state highway that turned off, crossed the tracks and went out past the Homestake mill sites and then on out to a junction, later to be named Ragland Village after a fellow named Ragland who established a little bar and trailer court there. At that point it divided. The regular state highway, Highway 53, went on out to a town called San Mateo, which was on the northwest slopes of Mount Taylor. Then a side road led off from that. This was really very poor. It led out into the Ambrosia Lake region. The whole thing was just a dirt road and was nothing but ruts, very, very slow going, very dusty and dirty.

The AEC, as part of its development program, had undertaken to provide funds to the state to pave the portion from across the railroad tracks out to the Ragland intersection. Later it was paved all the way out to San Mateo, but I think the state provided the funds for that. The AEC also provided for paving the road that turned off, I think it's called state road 509, at Ragland intersection and went on out into the Ambrosia Lake area. They did not pave to individual properties. They just paved it out into what was called Section 13 in Township 14 North, Range 10 West, and stopped right in the middle there. There was no particular objective there, but that's where it stopped.

Kerr-McGee and Homestake got together; we had a lot of interspersed properties between us. So we decided that we would try to build a road in place of all these tracks and ruts, starting from a connection on their Section 30 to the AEC road that would lead by where they were going to locate their mill, and lead by our Sections 25, 23, and end up at our Section 15 and their Section 22, which were right next to each other. We had to first of all acquire a right-of-way. Because we had the right to go on this property under the mining law, we had a right to go on and build a road, but we didn't have title to it. We wanted to get the state to pave it. The state wouldn't pave it unless we could give the state title to the road.

So we went to the landowners. Basically we had to deal with an elderly rancher named Golden P. Roundy who was a Mormon rancher, fairly well-to-do. He had the land rights on Sections 15, 23, and 25, and a number of others that were under our lease from the Santa Fe Railroad. He was to be the recipient of the one-and-a-half

percent royalty that the Santa Fe Railroad had agreed to pay him in return for damages.

Roundy lived in a new large brick house built on a small hilltop on his ranch land--quite a few miles out of any town. He was the bishop of the local Mormon church and was well known and very busy in the daytime, so Bokum and I had to make appointments to see him in the evenings. There was a dirt road that led to his house, but he used horses for a lot of his ranch work, so outside the front door of the house was a hitching rack where horses were tied up in the day when not being used. Consequently, we had to wade through a lot of horse manure to get to the front door, and spent quite some time and effort cleaning off our shoes before going into this beautiful new home! We really needn't have bothered, because when we went in we found that no one else had. The saddles and saddle blankets were piled inside in the entry hall and the combined odors in this new beautiful home were appalling! Once inside we met in the living room which was far enough from the entry hall not to be bothered much with the horse odors.

After several sessions with him, we did negotiate the purchase of the right-of-way and we purchased this outright from him. Then Kerr-McGee did likewise for these pieces of road that were in their area. Then we went to the state and made an arrangement with the state whereby Kerr-McGee and Homestake would build the base and then the state would come in and blacktop it. So we went ahead and built the base, laid out the road--

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--from Section 23 up to Section 15 and down to Section 25. Also we made plans to run the gas pipeline along this road right-of-way. It took quite a while. We contracted with a road-building firm to build the base. Then it served as a gravel road for a long time. I forget, it may be six or eight months. It took a long time before the state got around to paving it. It might have been as long as a year, I don't recall.

Assuring the Water Supply for the Mills; Drainage for the Mines

Swent: I think on the matter of water for the mills, I've already mentioned that we had to buy agricultural rights and convert them to industrial rights. They had to be used once every four years in order to conserve them. One year we had to go into a farming project. What we had were rights to draw from the Bluewater Toltec Irrigation District when they released water from Bluewater Lake.

This was not a certain thing. They only released it at certain times of the year.

But these rights gave you the right to drill a well. So we drilled a deep well on each mill site, about 900 feet deep, to what is called the San Andreas Formation. That's a limestone formation that has quite a bit of water in it. Actually when we finally did intersect them, I remember at least in the Homestake-Sapin Partners well the water rose up to a level of 160 feet from the collar. It was artesian in nature. It didn't come to the surface but we didn't really have to pump from exceedingly deep.

It was very surprising. We must have gotten into different channels, but we were very lucky that both wells hit a water channel and had plenty of water. We were never bothered with lack of water. But the Homestake-Sapin water was particularly poor in quality. It had lots of mineral and it was corrosive in many ways and it tasted terrible. We had to treat it for use in the boilers. We had to have an extensive water treatment system installed. The Homestake-New Mexico Partners well gave much sweeter water. It still had to be treated, but it was much better than the Sapin water.

We interconnected the two water systems for fire protection, so that in case of a fire either one could use the water resources of the other. In the long run the Sapin water, after four or five years, corroded out a lot of the initial pipelines. We had to replace a lot of them. But the operation of those wells was always a critical matter. Every once in a while, of course, we would have to replace a pump or take it out for maintenance. And this would tie us up. We had a big water storage tower with which, if we were careful, we could get along for a day or so without using the wells.

Chall: Otherwise would you have to shut down?

Swent: The mill, yes.

Chall: You couldn't do that very well, I guess.

Swent: The two mills could be shut down, independently of each other, but shutting either one down involved a day of lost time in shutting down and another in starting up, and was an expensive operation.

At the mines there was no problem with water. There was a problem with disposing of it, not getting it. Of course, when the water came out of the mine it had a lot of sludge in it, lots of rock grains. It was very dirty. So at each mine we set up some big settling ponds. Then when the water settled and was clear we

let it overflow from the settling ponds and put drainage ditches down to the regional drainage creek, then discharged the water there and let it run on down. Most of the year that water sank, went into the sand and after a few hundred feet it was still a dry stream. It was only wet when there were rains. The drainage stream came down by the mill. As part of the mill construction we did have to dig a diversion channel to divert it around the mill site so that in case of a heavy storm the mill wouldn't be damaged.

Establishing Offices at the Mill Sites

Swent: With respect to offices, I don't recall whether I mentioned this before or not. We started out in a little office in an old store in Grants. Obviously we had to grow out of that. Dick Stoehr rented a new building that was being constructed in Milan. As soon as it was finished--it was just a concrete block building, a hallway down the middle and a bunch of offices on each side. As soon as that was finished we moved in. We spent, I guess, maybe a year in that office while the offices were being built at the mines and at the mills. We built a separate office building at each mill and had a main mine office building at Section 23 and a small office at Section 32, as well as at Sections 15 and 25.

Chall: Headquarters for you?

Swent: The headquarters for the whole operation at that time were at this building in Milan. Then later when we moved out to the mill site offices, the Sapin office was basically the headquarters for the entire operation, at least to begin with.

While we were in that office, one day a gentleman wandered in late in the afternoon--this was 1957--and wanted to speak to the manager. So he came in to talk to me. His name was Leonard Pickering. It turned out he was an attorney in Albuquerque who had just left the National Labor Relations Board [NLRB]. He had been a prosecuting attorney for them. He was establishing himself in business in Albuquerque and was trying to get clients. One of his interests was helping managements resist unionization.

Of course, we had started in with the Lead background, being nonunion, and wanted to stay nonunion in this new operation in New Mexico. But it was real questionable. We were trying to set up personnel policies and wage scales such that we could try to stay nonunion. And this was really drummed into everybody, that this was the objective. Because you can't do this unless you're really

sincerely trying to carry it out. It isn't something that you just pay lip service to.

Pickering wanted to know what we were going to do about the unionization, and said that it was going to come pretty soon. We knew, too, that sooner or later there would be an effort to unionize us, particularly after the construction work was done. So I put him in touch with Ken Kellar in Lead, to have Ken check him out. Ken was very favorably impressed with him. So we eventually retained him, put him on a retainer, to be used whenever we had labor problems.

Another little incident that happened at the same time, while we were still in that office, was one afternoon Rodney De Villiers, who was president of Rio de Oro, one of the Homestake-New Mexico Partners, came in and asked for a financial statement at the very end of the day, whatever day it was. In fact, I was the only one left in the office. The partnership agreement said that they had the right to come and look at records and that sort of thing at reasonable hours. I told him that I couldn't produce them right then, that I would have to wait until the next day; I told him that everybody had left. He was very gracious about it and left. Then the next day we accommodated him. But later on he made a big issue about not having been able to get these when he wanted them.

Handling Labor Union Elections

Swent: To go back to the labor matters, Pickering represented Food Machinery Company at the little West Vaco operation. They got embroiled in a little labor situation and they finally had a representation election which went no union as a result, I guess, of his advice. There were about twenty employees involved. Not very many, but that was at least a step in the right direction in the district.

We didn't become targets until construction had been finished. Construction was finished, of the mills, anyway, and we were producing by then from some of the mines in late August of '58. By then we had hired--of course, the mines were running. We had a fairly sizable force at the mine. I don't remember how many at the moment. That would be the Sapin mines. We had two mill forces, one at the Homestake-New Mexico Partners mill and one at the Homestake-Sapin mill, that were going through shakedown operations and getting to know their jobs. This then made us eligible for a union election.

There are limitations on this. The NLRB won't agree to an election if it's a beginning business and you don't have a representative number of employees yet. If you have twenty employees, for instance, and you're going to have a thousand, they won't authorize the election until you've got a sizable part of a thousand. But by this time we were up to where elections could be had. So the campaigning began. The various unions--there were a number of them: the Uranium Metals Trades Council, District 50 of the United Mineworkers, and the United Steelworkers, all were interested in trying to organize the workers. They began going around to our employees.

The system that's followed, the routine that's followed is that they can come to the employer and ask the employer to recognize them, which they did, and we refused. Then the next step is they can go to the individual workers and get them to sign authorization cards designating the particular union as their bargaining agent. They then take these cards to the NLRB, National Labor Relations Board, and the NLRB checks them against the company payroll. If they have 30 percent or more of the employees signed up on authorization cards, then the NLRB orders an election. So somewhere in late 1958 we were served with a petition for an election and had to submit our payrolls to the NLRB for them to verify the 30 percent.

Chall: Was this one union 30 percent, or did you have all these other ones?

Swent: Well, one union has to have the 30 percent. Then the others can get on the ballot, if each one has signed up only one employee.

We wound up with an election set [pauses, looking through scrapbook] in October of 1958.

Chall: Is that whole book on the union?

Swent: It's on the one election, yes.

Chall: Was this in both mills, or just one?

Swent: Well, the unions had petitioned for one [election]. We objected and said that they were separate legal entities, and had the election broken up into two elections, one at Homestake-New Mexico Partners on one day--it was a Wednesday--and then the other election at Homestake-Sapin Partners on the following day, on Thursday. They were to be separate elections and separate bargaining units.

Chall: Was this a strategy?

DO'S AND DON'TS FOR FOREMEN

I. As representatives of your company you cannot:

1. Ask an employee if he belongs to the union.

2. Ask an employee who belongs to the union.

3. Ask employees if the union organizer talked to them.

4. Interrogate employees on anything concerning a union.

5. Promise an employee anything to sway him concerning joining or not joining a union.

6. When a union starts organizing, neither you nor your company can put into effect changes in wages or conditions, to try to stop the interest in the union at that time.

7. You cannot threaten an employee in any manner to sway him on a union question. For example, you may not threaten an employee with discharge, cut in pay or change of hours or conditions, because the employee is advocating a union.

8. Under the law, you cannot even intimate these things to them indirectly.

9. Threaten a close down of the plant or job if a union should be organized.

10. Spy on union meetings.

11. Refuse to hire a qualified applicant for a job because he does or does not belong to a union.

II. You can and should:

1. Keep organizers off the company property.

2. Forbid any solicitation of any kind, not limited only to unions, during working hours on company time--this should be handled by an over-all company policy rule.

3. Treat employees in such a manner as to keep good will and respect for both you and the company.

   a. Be fair and show no partiality.

   b. Be courteous--treat any employee as you would want to be treated.

   c. Keep in mind that a man treated right and satisfied with his job and company supervision is worth more to the company and will put out a better days work.

4. Management and you, as representatives of the company, have a right and should express your opinion concerning unions, but you must remember that this is limited under the law to expressions which do not contain either a promise of benefit or a threat to change employees concerning a union.

5. If employees ask you any questions concerning a union, unless you are absolutely sure, you should inform the employee that there are so many labor laws restricting what can be said and done insofar as the union is concerned, and that because it is so easy to get in trouble by saying or doing the wrong thing, that you will be glad to make inquiry and find out what is proper and let the employee know.

Swent: Well, yes, we wanted to keep them separate. We thought we might have conflicts between the two partnership interests if there was only one bargaining unit. [looking through scrapbook] I'm trying to find the election date. It was October 6, 1958. We put on a very intense campaign. We issued a series of instructions to all the foremen in writing as to what they could not do. This is a copy of the instructions that we gave them.

Chall: You had to stay within the law. I guess Mr. Pickering knew that.

Swent: Pickering was very useful, absolutely. Ken Kellar came down from Lead and Don Howe came down. Ken was there for a few days, and we outlined what our strategy would be. The election was set up about a month in advance. Then Kellar went back, but Don Howe stayed right through the election and was a great help in drafting letters, getting them printed, and placing newspaper advertising.

Chall: So what did the company do on its side to get the personnel to feel that they didn't need the union? What was your strategy?

Swent: Well, we issued a set of letters, mailed letters to each employee. There were several letters, not just one, giving all the advantages that we thought there were to staying nonunion. Here's a set of the letters that went out to Homestake-New Mexico Partners. They were identical for the Homestake-Sapin Partners.

Chall: Quite a bit. That must have been done over a week or more.

Swent: Yes, they were every few days. We set out our benefits, wage scale compared to those of--well, we called it the largest union contract in this area, that was Anaconda--and showed how ours were better. Then the union challenged us to a debate, challenged me to debate with them. Of course, we refused that on the grounds that under the NLRB Act, employers are limited in what they can say, whereas the unions have no limitations on what they can say. So that such a debate would be debating from a straitjacket.

We took out ads in the newspapers and we got some publicity. Jim Barber was editor of the Grants Beacon, and Bud Rouse was editor of a smaller paper called the Uranium Empire Reporter--we had made good friends with both of them. They helped us out. Actually, it turned out they had some nonunion people. Particularly the Grants Beacon, (which later became the Grants Daily Beacon, with five issues a week), which was a bigger paper, had some strongly nonunion people in their organization that were quite willing to work overtime and help us. They were very helpful.

Chall: What kind of help did they give you?

Swent: Well, they stayed up nights, worked overtime to set up ads and print special things. Like all these letters were printed at their place. We didn't have places to print them, so they did the printing for us. They gave us some help in the news coverage.

Chall: You have a special story. You have front page: "Homestake Vote Campaign Heats Up Near the End."

Swent: Yes. The first election was on a Wednesday. It was the Homestake-New Mexico Partners one. That was the critical one. That was real critical. This set the policy for the entire next thirty years. The voting came out no union by a margin that was just one vote. There were a number of challenged votes. Generally if challenged votes are critical to the outcome, no result of the election is announced. The challenged ballots are considered on the basis of whether they're properly challenged or not, whether the people who were challenged were eligible. Then they're opened or not opened, individually, and then the votes are counted. They're mixed in and the ballots are counted again. So they don't know how any individual voted.

Chall: Did you have any challenges?

Swent: Yes, we had a few. Let's see, the results were 43 no-union votes, the United Mineworkers got 22 votes, the Uranium Metal Trades Council got 10 votes, and the United Steelworkers got 3. So that was a total of 35 votes for the unions against 43 no unions, and there were 7 challenged ballots. We had one vote more than was necessary, even if all the challenged ballots turned out to be union votes.

Chall: That was pretty close, wasn't it? It was a cliff-hanger.

Swent: Yes. So then what we did--the election results were known by about six o'clock in the evening. So we rushed down to the Grants Beacon and had them print up these announcements [points to them in scrapbook]. We had many of them printed up during the evening. Somewhere around ten or eleven o'clock at night Pickering, and Don Howe, and I went around putting these out where the men changed clothes when they came to work in the morning at Homestake-Sapin Partners. Because the Sapin election was to be the next day, and we wanted them to know the results of the first one. So we put these all around. In addition to that we made some large placards that--let's see if I have any. I've got one here, I know, if I can find it.

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The decision is based on the number of votes cast. If you have a hundred employees who are eligible to vote but only ten vote, six people can determine the outcome. So we were urging everybody to vote. We had these placards--this was for the Homestake-New Mexico Partners election; this one was for the Sapin election. They said the same thing--urged everyone to vote.

Chall: Did you think that the results of the votes of the first day might weigh the results of the second day?

Swent: Oh, we definitely did. That was why we made such an effort. Then we drew these. These were just hand done. We had these with the results on them posted when they came to work the next morning at Sapin. [shows large printed poster with election results] We had them both at the mine and mill. We had two polling places. We had a polling place out at the mine and a polling place at the mill. The Homestake-Sapin Partners won the election anyway. It went 102 no union, 51 Steelworkers--which was surprising; they had only gotten 3 at the other mine--23 for the Mineworkers and 12 for the Uranium Metal Trades Council, for a total of 86 to 102. There were two challenged ballots, and one void ballot. We had more margin on this one.

This was a real achievement. Basically, except for the little West Vaco election, nothing like this had occurred in New Mexico. Nobody had ever really tried this and done it. Even Jim Barber, who had been friendly to us, was surprised by the result. He didn't think we could do it. He wrote an editorial saying so, but I don't seem to have it here. I have it somewhere.

Chall: Of course, this was the first time that Grants and a large part of New Mexico had become industrialized. So I suppose--

Swent: Oh no, no, there was a lot of mining in New Mexico. Down in Carlsbad there's a large area of potash mining, a number of big potash mine operations. Down in the Silver City, Hurley area, Kennecott had a great big open pit and smelter. And there were a number of smaller mining operations there.

Chall: Were any of them union?

Swent: Yes, they were all union.

Chall: I see.

Swent: Now some of the unions that were in the potash business did not attempt to get into our election. But I think they had Steelworkers down at Kennecott, among others. Kennecott was one of those companies that deals with a whole bunch of unions.

But at any rate, they didn't make it. This gave us a year. The NLRB rules are that when an election is held and the results are certified, they will not hold another election until a year has passed. The Steelworkers submitted a bunch of objections to the election, the conduct of the election. They were investigated and found to be groundless. The election had been conducted and nobody had misbehaved. With Pickering's guidance, all of our people had behaved properly. There was no evidence of coercion or unfair labor practices. In fact, there wasn't even an unfair labor practice charge filed. There were objections to the election, but the NLRB investigated them and denied all of them, said they were baseless, and certified the results of the election.

Chall: I guess there was jubilation on the part of the company.

Swent: Yes. Then Kerr-McGee and Phillips thought they would do the same thing, and they tried it. Some of the stuff I have here is related to the Kerr-McGee election and that sort of thing.

Chall: How did they do?

Swent: They lost, Kerr-McGee by two votes, and Phillips by more. A run-off election between the Oil, Chemical and Atomic Workers (OCAW) and the United Steelworkers of America (USWA) had to be held at Kerr-McGee, and OCAW won. Phillips got the OCAW in its mill, and the USWA in the mines. Basically the difference was they weren't operating on a day-to-day basis of trying to treat their employees, as we had always treated our employees. They tried all of a sudden, when the election was facing them, to come out with a series of letters like ours. And this alone won't do it. You have to have the basic confidence and trust of the employees before that.

Chall: They know the difference.

Swent: They could tell the difference. So the Partnership election wins held the unions off for a while, for a year, under the NLRB procedures.

In August 1959 petition was filed by the Oil, Chemical, and Atomic Workers for an election at Homestake-Sapin Partners. They didn't have the 30 percent. Now what the NLRB does when they don't have the 30 percent but are close to it is they tell the union that and then give them forty-eight hours in which to get additional signatures. If they don't get up to 30 percent in that forty-eight hours, then the petition is dismissed, not acted on. The Oil, Chemical, and Atomic Workers were very short. They were short many, many signatures. They were given forty-eight hours,

and lo and behold, at the end of the forty-eight hours they came in with a whole bunch of extra cards. They had the 30 percent.

Leonard was very dubious about this. He felt there was something improper here. So he finally prevailed on the NLRB, whom he had good relations with because he had worked with them, to come out to the mine and check the signatures against our personnel cards. Now this is a very unusual procedure; normally they wouldn't do this. But he got them to do it. The examiner came out. We put him in a conference room, and he asked to be alone. He didn't want us to see these cards, of course. He asked us to bring in our personnel folders that had the employees' signatures in them, in file boxes, and leave them on the table and he would go through and check them by himself. So he did this. The room that he was in, the conference room, was right next to my office. In fact, there was a door between them, which we kept closed. After about an hour or so, why, he came in and asked me if he could call a few representative employees in to check with him. He said, "I think we have a bad situation here."

So I said, well, we could call those who were on duty in the mill at the time. He gave us the names one by one. We called those on duty in one by one and he interviewed each one alone. Basically I could hear through the door what was transpiring. He would ask them if this was their signature on the card. They would say yes or no. Most of them said, "No, it's not my signature." Although one of them said [laughs], I remember very clearly, he said, "No, that's not my signature, but I would have signed one if they'd asked me to." He said, "We need a union here real bad." [laughter]

When it was all through--and he got it all done in one day--he said, "Well, you've got a very bad situation here." He didn't just say what it was, but it was obvious to me it was fraud. So he went back to Albuquerque and they dismissed the petition the next day. Then we tried to get the FBI to come in and investigate and prosecute under the law--there's a law for lying to the federal government, submitting false information and this sort of thing. We tried to get the FBI to enter into it, but the FBI in New Mexico was completely under the control in many ways of Senator Chavez.

Dennis Chavez, who had been senator since about 1935, and had lots of power, wouldn't let them do it, wouldn't let them investigate it. Leonard Pickering tried and tried and tried. It was found that the OCAW [Oil, Chemical, and Atomic Workers] was doing this in a number of different places. There were other elections or petitions around the area that the NLRB investigated and found there were forged signatures. Two of the unions that

made up the Uranium Metal Trades Council, the union at Anaconda, were found to have forged cards in some Albuquerque cases.

Chall: But they didn't prosecute?

Swent: Pickering couldn't get any prosecution. The FBI wouldn't investigate. The first thing the FBI had to find out was who did it. We never knew who did it, as an individual. We knew that the union organizers in general were doing it, but you had to identify the man or men who were doing it. Nothing ever came of that. Finally, after two or three years, the NLRB said that they would no longer investigate the validity of signatures. They gave it up. But that first investigation saved us another election there.

[The second Sapin election was held January 12, 1961. We were helped by the fact that shortly before the election OCAW at the Phillips mill and USWA at the Phillips mines had just signed an indefinite contract extension with no wage increases or other changes, and the United Mine Workers, District 50 had negotiated a contract with Phillips at their Church Rock mine (near Gallup) with no wage or fringe benefits increases or changes. There was also a dispute at Kerr-McGee stemming from the OCAW organizers telling employees that had not signed cards that they could vote on the contract OCAW had negotiated if they signed cards, saying that the cards were merely to identify them as Kerr-McGee employees. Later, after contract approval, the OCAW claimed these people were, indeed, members and dunned them for back dues. Some sixty-three employees refused to pay, and OCAW asked Kerr-McGee to fire them. The employees filed a charge against OCAW with the NLRB, who ruled that they were members because OCAW said they were!

Another favorable factor was a move by the four unions to try to get a legislative prohibition against the incentive pay, or contract, system we used in the mines or, failing that, to give the state mine inspector the power to prohibit the system in dangerous areas. This boomeranged quickly on the unions as the men were very much against it, and the unions changed their tunes and tried to put the blame for these proposals on each other.

Still another favorable factor was that we had raised wages since the first election and were still paying wages competitive with the highest in the district.

The results of the second Sapin election were: No union, 302; OCAW, 28; UMW, District 50, 20; Uranium Metal Trades Council, 13, spoiled and challenged ballots, 4. Out of 382 employees eligible to vote, 367, or 96 percent, voted. The no union vote was 82

percent.][1]

Homestake had at that time a little monthly publication called Sharp Bits, which each month was filled with pictures and a short story about a particular phase of one of our operations. We were asked to work up the material for an issue about the Homestake-Sapin Partners operation. I asked Don Delicate to write up the text for it. He wrote up a nice little text and sent it into me for review, approval, and then transmittal to Don Howe. Don Howe was the fellow who published it up in Lead. Don Delicate gave the number of workers in each mine in his write-up, saying there were so many production workers, so many maintenance workers, and so many service workers in each mine.

One of the things that we had been very careful about--and Claramay Snyder and Pickering had both mentioned this--we were very chary about telling anybody how many employees we had. Because the unions, the organizers, have some problems. They have to find the employees. They can't come on the property, they have to find them off the property, go to their homes. And they have to know when they have 30 percent. So we never published, we never gave any press releases, we never told anybody how many employees we had.

Don had put all this in this Sharp Bits article, and it had some logic to it. It was to show what sort of productivity we were achieving. So I went through and I deleted all the maintenance people and just limited it to the figures that he gave for the production workers. It was published in October, 1959. We were served with a petition a year after the '58 elections by the United Mineworkers. The NLRB called a hearing on it, and in the meantime at the last minute discovered that they didn't have the 30 percent, and dismissed the petition at the hearing. As we were leaving the hearing room--it was held in Albuquerque--I overheard the Mineworkers fellows talking to each other. One said, in essence, "I just don't understand how we didn't have 30 percent. I got the figures out of Sharp Bits." [laughter] So that saved us an election at that point.

We finally had another set of elections. We did have a set of second elections, but they weren't so close together. The Homestake-New Mexico Partners election was held on October 5, 1960. At this time Clyde Osborne was manager of HNMP and I was manager of the Sapin Partnership. Clyde handled the election very well to the extent of getting 100 percent turnout of the eligible 95 employees. The results were 76 no union votes, 13 for the United Mineworkers, District 50, 3 for the OCAW, and 3 for the USWA. No ballots were challenged.

Then in later years--and I've forgotten just when, maybe about

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[1]Paragraphs added by Mr. Swent.

1963--we had another election. The petition was filed and you never know how they get 30 percent because the result--we again had over 80 percent no union vote. As things rolled on our majority got greater and greater. The very first election was the crucial one, where we got by with that one vote. Then the majorities kept going up. All in all while I was there we had five elections and we won them all.

Chall: Did it change after you left?

Swent: No. No, it's still nonunion today. They had one or two elections after I left. As I say, you have to run the operation tailored to staying nonunion. You have to use what I call the paternal approach, and treat the employees fairly, give them hearings, let them bring up their beefs and have access to superiors. One of the things I did was, I had a company rule, that nobody could fire an employee unless I approved it. They could suspend a man and say, "I want to fire this man," and let me know. Then I would investigate the case. I would always check with Leonard Pickering before we did fire anyone; go over the facts with him, because I didn't want to get trapped into an unfair labor practice charge.

One of the common union tricks is for somebody who is an obvious strong union organizer within the company, to get himself fired. Then they file an unfair labor practice charge and claim that he was fired for union activity. We avoided this by having this ruling. But a lot of people resented it. A lot of our shift bosses resented not having the power to fire. They could recommend firing, but they couldn't actually do it until I approved it.

Chall: Do you recall whether you backed them up a good part of the time?

Swent: Oh, most of the time, yes. They were usually for good cause. For one thing, having that rule in effect made them think a little bit before they would fire anybody. They couldn't fire them just because the guy was a little late for work one day or they didn't like the way he was talking that day. They had to have substantial reasons.

Then we adopted a system of what we called warning slips. They were a regular form that a shift boss could fill out. If a man violated a safety rule or any other company rule, the shift boss could make out a warning slip and give it to the man and a copy went to his personnel file. If he acquired four warning slips in a year's time, he was subject to discharge. But I would review those cases too, just to be sure that there was no extenuating circumstance or some union involvement that would generate an unfair labor practice charge.

We did fire one real wild-eyed union organizer, Elvin Ross, at Section 25 who exploded and called the foreman there, Joe Robison, just a whole bunch of filthy names. I don't remember now what the incident was over. He was one of the best organizers for the United Mineworkers, District 50, at that location. So the union took this one to an unfair labor practice charge. There was a hearing on it and we won it. Then, of course, he was fired for cause. Under New Mexico law his unemployment compensation was therefore deferred for six months. He didn't get any unemployment compensation for six months. So they called for a hearing on that. Again we won. We had to have three hearings, I remember. Anyway, we won all three, but it was very time-consuming. But it was an obvious case. He applied for work with Kerr-McGee two weeks after we fired him and they didn't hire him, so the union filed an unfair labor practice charge against them at the same time as they filed ours. I don't know how that one turned out.

Over the years, Kerr-McGee had two very long strikes of several months' duration, and Phillips had one eleven-day strike. Our employees worked throughout these strikes and didn't lose a day's wages, and we gave wage increases as needed to stay competitive. These factors ensured our later no union votes.

Of course, we also had a non-discrimination clause in our AEC contract. This required not only care in hiring and firing people, but we also had to try to be fair in the hiring and not discriminate in advancements or firing. This was the very beginning of this anti-discrimination business. Our contract was signed in 1957. Claramay did a beautiful job of following all that and doing it well.

Chall: I noticed in Sharp Bits, at least the ones that I've read so far, that there weren't any blacks in your employment. At least, they weren't pictured.

Swent: Well, there were very few blacks in the area.

Chall: And they didn't come in to work?

Swent: No, they didn't come in. But we did have a few. We had one fellow at the mill, somebody Washington--I forget his first name. He became a real severe problem. We refrained from firing him for quite a little while. Finally we fired him. The AEC had a person who came in once in a while to review compliance with the non-discrimination clause. This was a woman from Albuquerque. She came in, and we were worried about having fired Washington, as to whether there would be any complications from it. She went over the case and she said, in essence, "You should have fired him sooner. It was perfectly justified." [Chuckles]

As time went on, we built up a few black employees both in the mines and the mill, and on surface with no problems.

We never had any problems with the Indians on this score. They're a minority also, but they were no problem. And no problems with the Hispanics. We had lots of them. The only potential problem we had was with Washington.

One difficulty we had was that by law we were not allowed to ask any applicant about his or her race, sex, religion, etc., but we had to make up reports to the AEC showing how many of each race we had employed. With no records on this we simply had to decide each person's race on our personal observations and opinions.

Chall: Otherwise you apparently had a pretty clean record as a company.

Swent: Yes.

Chall: Well, you had a long period to develop policy at Homestake. Did you have any difficulty with the Sapin and the other partners with respect to your personnel policies?

Swent: No, we were never criticized by our partners for how we conducted the labor policies. In fact, Dick Bokum, who had become president of Sabre-Pinon Corporation, congratulated us on the union election results. They later operated some mines independently and they did the same thing and managed to keep from being unionized. They learned from us.

Chall: It seems to me you had an extraordinarily busy several years. I mean, maybe all ten were like this, but I would guess that the first three or four must have been extraordinarily busy for you.

Building the Hospital

Swent: They certainly were. Now another problem we had in the area--I think I mentioned this before--there was no hospital other than this little tiny clinic that Anaconda had for their own employees and which they did make available in cases of emergency. It only had four or five beds, something of that order of magnitude. So, in 1957 we had talked a little bit about a hospital and we did make the arrangement to bring in Dr. Matt Connell and establish the Grants Clinic. He sent in a doctor named Norton Ritter to do the initial work there. I think I went through the hiring procedures and all that.

Chall: Yes.

Swent: There still was no hospital. Our employees could go to these doctors for treatment if they wanted. But there was an organization that I learned about--I didn't know about it at first --called the Western Valencia County Health and Welfare Coordinating Council, which had been formed as a non-profit organization and was trying to solicit funds, pledges from people, to get a hospital built. They had a promise of a piece of land from an old Grants resident named Monico Candelaria. So I got involved in that. I went to some of the meetings. The thing was sort of in the doldrums. There was a fellow named Bo Cook, who was a pretty dynamic individual that was trying to lead it. But something happened and he couldn't continue. There was nobody else that really had the energy to continue this fund drive. So I was elected to replace Bo Cook as fundraising chairman.

Chall: Were they trying to build a hospital?

Swent: Well, they wanted to raise enough money that one could be built.

Chall: I see.

Swent: At that time there was a federal act called the Hill-Burton Act, which gave states money for hospital construction, expansions, and improvements. States then allocated the money to the hospital-building programs or improvement programs in the state on a matching basis. The community had to come up with a certain amount. This would vary. But as we got into it we found that we were eligible, because of the fact that there was no hospital at all, for a 50-50 matching basis on Hill-Burton funds. So we decided on about a forty-bed hospital for the community. Checking with the doctors we determined that that would be an adequate-sized hospital. Cost estimates were that this would cost around $500,000. So that meant we had to raise $250,000 privately in the community. I kept working in this Western Valencia County Health and Welfare Coordinating Council. When Bo Cook pulled out--

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Chall: Could you not have maybe delegated this work to one other person in your administration?

Swent: Well, I didn't do everything in this hospital fund drive. One of our employees, Bill Storey, did the day-to-day work. Once I was into the fund drive, I did get a lot of other company employees and their wives to begin working on it and go out on a door-to-door basis. I started a regular formal solicitation program. Anyway, we raised well over $70,000 worth of pledges. We took them to the

bank, finally, to get an evaluation of how much they would lend on that, against those pledges, because for the Hill-Burton funds you had to have the cash in hand. It was the Grants State Bank; that was the only bank in the town at the time. They said they would lend us $69,000 against all the pledges, after allowing for a certain amount of uncollectible ones.

In addition, the ladies organized a progressive bridge party to raise money, and at another time put on an all-day fair at the Catholic church's St. Theresa's Community Center in Grants.

At another point, Senator Dennis Chavez came to Grants and spoke at a local Chamber of Commerce meeting. He announced that the federal Hill-Burton funds were approved, and he had done all he could. We now had to match them. He encouraged me to keep the local fundraising up and spearhead the drive to match the federal funds, saying that only a local program could do this.

With the bank loan promised, I went back to the companies. We had talked about it some. The companies were willing to put up some funds but had wanted to see from the local fund drive how much interest the residents had in having a hospital. So eventually Kerr-McGee, Phillips, and Homestake--that is, the two partnerships --put up enough funds (over $180,000) to make up the difference to $250,000. Anaconda did not participate, claiming that they had made their contribution with their clinic and their policy to let non-Anaconda people use it in emergencies. The other four of us decided to share the contribution in the same relative amounts as the nominal daily tonnages for our mills, as specified in our AEC contracts. It took several weeks to get all this done and approved by the respective offices and boards of directors.

Then we formed a hospital corporation, which was separate from the Welfare Council. The owners of the hospital corporation were the Welfare Council and each of the companies that was contributing money. The Phillips people did all this legal work. We set the new hospital corporation up as a non-profit corporation, then submitted an application to Hill-Burton for the matching funds for a $500,000 hospital. We had already made a preliminary application and laid the groundwork for a final application. The state people knew that there had to be a hospital there. They were aware of the growing pains that Grants was going through. So it was approved relatively soon.

We also had to have land on which to build. This was donated by Mr. and Mrs. R. B. Candelaria, two old-time residents and landowners in the area. The site they donated was right next to the new housing area. (In fact, they sold adjacent land to Kerr-McGee for a housing project.)

Then I was elected chairman of the board of trustees of this hospital corporation. We had negotiated a contract with an architect firm in Albuquerque who did the design for us. We went to bid in May of 1958. The bids came in in June and were very disappointing. They were about $100,000 too high. So we went back to the architects, modified the plans some, raised $35,000 more public and mining company funds and got $35,000 more matching Hill-Burton funds, and started construction in late July, 1958.

We had to hire an administrator. We had problems with this. Interviewed dozens of people. One poor guy was killed in an automobile accident, driving up to see me for an interview. I had no real experience in this and we had nobody really to deal with that knew how to evaluate a hospital administrator.

Chall: There weren't that many around. I think there were a lot of Hill-Burton hospitals being built in those days and there was probably great demand for administrators.

Swent: Yes, but we finally hired one, Anthony Cuty, as a first administrator. He came in to watch some of the construction and to start selecting equipment, that sort of thing, that would go into the hospital. That all worked fairly well. We found out later that he was taking kickbacks from the suppliers and things, but at least we got it done, but eventually we had to replace him when he resigned after a number of irregularities in his conduct came up.

Chall: That hospital was not very big.

Swent: But it was quite adequate for a long time. It started as thirty-eight beds and then later we managed to expand it to forty-two. But it served the community. It's still there, still operating.

Chall: What name did you give the hospital?

Swent: It was called Cibola General Hospital.

However, it's gone through a few legal changes. Just recently, because of the big decline in the uranium business, they've had real hard times. As long as the uranium businesses were there and we had insurance--all the major companies had medical and hospital insurance for their employees--major collections weren't too difficult.

They did have problems with collections on Indians and passers-through. We had a lot of highway accidents that came in, and collections on them were difficult. And you had to treat them. You couldn't say no, you wouldn't treat them. So there were a lot of uncollectables.

But after the uranium boom ceased, in the early 1980s, this did become a serious problem. The last three or four years they've had serious problems. Just last October they put it on a ballot for the county to take the hospital over and also to vote a tax levy for eight years, to help sustain the hospital. That all passed. So it's now in a process of becoming a county hospital. It has a guarantee anyway of eight years of tax support.

So that's the ultimate fate of that. But it worked well. That hospital was a very, very good thing for the community. The Grants Clinic people built their clinic right next door to it. We managed to save some money by taking some donated property to build it on. Property was donated by a Mr. Monico Candelaria, an old-time resident of Grants who had lots of land there.

The doctors that practiced there--there were about six doctors in Grants by the time the hospital got organized. One of them was an osteopath, John Fjord. He was so well liked in the community that even though AMA and AHA principles say that osteopaths can't practice in general hospitals, we gave him staff privileges there, because he was excellent. Very well liked, and he knew his limitations. When he got to them, why, he would tell people, you've got to go somewhere else.

Chall: Was it a full service hospital? Obstetrics and--

Swent: Well yes, for that sort of thing. But for real specialties they would transfer people to Albuquerque. There were several much bigger hospitals available there. At times, after about two years, Cuty got into real serious problems as an administrator and I had to negotiate his resignation. Then we were headless for a while, so we got the Presbyterian Hospital in Albuquerque to send out one of their assistant administrators to become an acting administrator. He was excellent. He was very good for us, until we got a new one.

Chall: Was your board made up of private citizens who could be appointed, or did you have elections?

Swent: Each company that was an owner could designate its representatives according to how much it had contributed. We had not all contributed the same amounts of money. We had spread it out depending on the size of our operations. Kerr-McGee had three representatives, Phillips two, Homestake-Sapin two, and Homestake-New Mexico one. Then the Health and Welfare Coordinating Council could supply four trustees. It had twelve trustees altogether. I was chairman for the first two years, and then served on the board until we left in 1966.

One of the members for the Health and Welfare Coordinating Council was Frank Holmberg of the Anaconda Company. He had been very helpful in the organizing drive and all throughout. Frank is still on that board. I was down in Grants ten days ago, and Lee saw him. He was acting as Santa Claus. But she recognized him through his uniform. I didn't see him, but he's still on the board. He's the only person that's continued all the way through.

So that may be a convenient place to stop for today.

Chall: I think so.

Swent: Unless you have a few questions or something.

Chall: Well, I can pull those in next time.

[Date of Interview: January 8, 1988] ##

Swent: It seems to me we left off somewhere about water supplies for the mill last time. Is that where we ended up?

Chall: I have a feeling that we covered water supplies.

Building the Infrastructure

Swent: Well, basically I'll go into some of the other elements of infrastructure that we had to take care of. There were a number of community things, such as housing, sewage for the housing, municipal water supply, the paving of access streets, the expansion of schools, that we had to work on. These were common problems to many of the companies. We tried to work together on them. It began sort of informally with one manager calling another. We spent a lot of time trying to get each other by phone.

Our offices were at completely different places. Anaconda had their office at their mill site in Bluewater, which was about ten miles out of Grants on Highway 66. Kerr-McGee initially had theirs in a house in Grants, until they managed to get some temporary offices built out at their mill site in the Ambrosia Lake area. They moved into those and then into permanent offices when they got the mill built. Phillips Petroleum did basically the same thing. They came in a little later. But we were scattered all over. To the Kerr-McGee offices out at the mill site was a sixteen-mile drive from our office. And to Phillips was about, maybe fourteen miles. They all had to go by our office on the way out--that is,

the Phillips and Kerr-McGee people had to go by our office when we moved to the mill site. So quite frequently we began meeting first thing in the morning in our office, because it was the most convenient one for everybody.

Chall: As general manager of the two partnerships you were really on your own and able to speak to these other major companies and make decisions?

Swent: Yes. It was really very essential for us to work together on some of these items. As I say, at first we would call each other up and say, "What do you think about this?" and "What do you think about that?" "What should we do about that one?" This was a real nuisance and time-waster. So finally I suggested that we meet every two weeks, and this worked out. After a while when things tamed down a little bit, I think we lengthened it to once a month. We kept this up for several years. It was a pretty regular thing for over several years.

Chall: If you needed to build roads or develop schools, handle sewage problems, you had ultimately to deal with the local community though, didn't you?

Swent: Oh, yes.

Chall: You weren't putting in private roads, were you? Still, you would have to get clearance.

Swent: Well, we worked together on those that we had to do privately. Like Kerr-McGee and we worked together on the extension from the AEC [Atomic Energy Commission] road out into our mines.

Working Relationships with Personnel of Other Corporations

Swent: This system worked pretty well. The people involved: originally, of course, Anaconda's manager was Jack Knaebel. He's the one that, I think I mentioned earlier, had tried to keep Homestake from building this mill there, by having somebody object to the transfer of water rights from agricultural classification to industrial classification. He had an assistant named Albert Fitch. Right under Albert was his brother, named Manny Fitch. I never did know what the Manny stood for. Maybe Manuel, but I don't know. All of them had had experience with Anaconda at other places and were long-term Anaconda employees.

Chall: Who attended these meetings? Would it be Knaebel or the Fitches or all three of them?

Swent: Well, it would depend on the subject matter. When it came to, for instance, the power matters, Manny Fitch was the person that would come in to discuss the power business, and sometimes political matters. He was their official lobbyist. They had been in New Mexico for many years and thought they knew New Mexico politics.

In general the Anaconda people were difficult to deal with because they were already there and established. And a lot of these problems didn't really apply to them as much as they did to us, to Kerr-McGee and Phillips and Homestake. They already had their operation. Everything was established. They had their housing and water supplies. They had their little clinic. So they sort of stayed out of those things. But there were other things in which they did get involved.

At all times they were peculiar people to deal with. Jack Knaebel was a pretty straightforward type of fellow; you always knew where you stood with him. Albert Fitch was a much more quiet person. He never said anything definitive and never thought out loud. You never could hear him, know what he was thinking. He was a heavy drinker, but even when he drank he was very pleasant and talked a lot, but he didn't talk about the business. So it was very difficult to know where you stood with him. Manny Fitch was similar, although I don't think he drank as much as Albert did. They were both originally from New Mexico, had gone to work for Anaconda, had worked in foreign countries, South America and then been assigned to the Grants project in the early 1950s.

Chall: Might you be surprised at some of the decisions they would make sometime later?

Swent: Well, they usually liked to do some of these things alone and not work with the group, particularly when it came to political matters.

Chall: I see. How about the other groups that you were working with, Kerr-McGee and Phillips. Were you able to work things out more easily with their heads?

Swent: Somewhat, yes. Kerr-McGee's first manager was Elmer Isern, who had been a prominent milling person in the tri-state district producing lead and zinc ores. That's in the Oklahoma-Missouri-Kansas area. That was a big mining district, had decades of operations. He came in widely acclaimed and was put in charge by Kerr-McGee. He had no uranium experience at all, although he did have some milling and, I guess, mining experience in the tri-state district.

He was succeeded after a few months by an old Kerr-McGee hand named George Cobb, who came out of the oil business, out of Oklahoma City, which is Kerr-McGee's headquarters. He stayed for a year or so. Then he was relieved by Marion Bolton. Marion Bolton was an old Kerr-McGee employee also, although perhaps he didn't have as many years as George Cobb had with them. But he was somewhat older and had been manager of the Kerr-McGee uranium mill at Shiprock, New Mexico, which was a small mining operation and 600-ton-a-day mill, which purchased a lot of its ores.

They had to buy a lot of custom ores. In fact, we sold them ores. Our initial sale was from Little Beaver. Then I think we later sold them La Sal ores after those got into production, until Atlas built a mill in Moab. It was easier to sell to Atlas because that was just a few miles away, about thirty miles, compared to about one hundred and thirty miles down to Shiprock. We didn't have to truck the ore so far. But we had dealt with them and dealt with Marion Bolton. I had met him casually at the Colorado Mining Association meetings in Denver, before I was sent to Grants. And when he came down he had background in the uranium industry. He knew the uranium business, knew a little bit about the mining and milling.

It was an acid-leach mill. A great deal of the experimental work to design the flow sheet for the Ambrosia Lake mill of Kerr-McGee was done up at Shiprock. They worked out a new wrinkle in acid leach metallurgy, that's called the solvent extraction process. They were aided by an ex-Kerr-McGee metallurgist named Wayne Hazen[1], who had worked for Kerr-McGee and then quit and went into the consulting business for himself--very capable. I think he still has a going consulting business.

Description of Various Uranium Extraction Processes

Swent: Anyway, he developed what they call the solvent-extraction system for them. The acid-leach circuit that they had in Shiprock was one of the original types, where they leached the ore in sulfuric acid. Then, by either filtration or settling in thickeners, they separated out the clear acid solution that had the uranium dissolved in it. It's called pregnant solution. Then yellow cake was precipitated directly out of this liquid with the addition of appropriate chemicals.

Chali: That was different from your method?

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[1]Plutonium Technology Applied to Mineral Processing; Solvent Extraction; Building Hazen Research; 1940 to 1993, Wayne C. Hazen, Regional Oral History Office, University of California, Berkeley, 1995.

Swent: Yes. We went the alkaline-leach method. The precipitation step was never a very satisfactory one in the acid-leach mills. Anaconda had developed a method of what they call resin and pulp, where they took specially-developed and specially-formulated plastic resins in little tiny beads, and put them in baskets that were alternately dipped and pulled out of a stream of the slurry containing the ground ore and sulfuric acid. These little beads were made of the proper chemicals so that they attracted uranium ions. The beads would pull the uranium ions out of this slurry.

They had them in baskets that were about, oh, a foot and a half wide and maybe three feet long. They were dipping up and down, a whole series of them, into this slurry. Then when the resin got loaded, that is, when it would not absorb any more uranium, they were taken off the line and washed in another solvent that removed the uranium from them and put it into the new solvent, and then they precipitated the uranium out of that solvent.

Wayne Hazen developed what was called solvent extraction. Instead of using the organic beads in the slurry, he developed a method of using an organic solvent, which was mixed with the clear pregnant solution, or the clear acid solution after it had been settled or filtered. They had mixer mechanisms that mixed them up and made sort of an emulsion. Again, the organic material was selected because of its affinity for uranium ions. It would take the uranium ions out of the water-based solution and put them into the organic solution. Then the mixture would be allowed to settle and separate. The organic phase now had the uranium in it. It would be pumped off separately and the uranium precipitated out of it. This was a new development and it solved a lot of problems of precipitation. The chemistry of precipitation was made much easier.

Chall: But your company didn't go to that?

Swent: No, we couldn't use this. We went the alkaline circuit. Now Anaconda's original mill, the first one they started to build based on Paddy Martinez's discovery of uranium in the Todilto limestone, was an alkaline-leach plant. I think I've explained before about the difference between the two circuits. The question is, the lime content of the ore. If the lime content is more than about 6 or 7 percent, it's not economical to use acid because the lime just consumes the acid directly, pound for pound almost.

Chall: In explaining these different methods, it would seem that the companies were open in allowing others to see how they were handling the different processes and what their success or lack of success was? Or were they pretty closed about it, and you would ultimately find out about it some way or other?

Swent: Well, they were generally fairly closed when they were doing any experimentation. But once a process was developed, they were fairly open about it. Because it was a non-competitive business. It's not like selling lead or zinc or something where it's a competitive market. The government had said they would buy all the available uranium. There was really no competition involved. Each of us had a contract for a certain amount of production. We weren't really competing against each other.

Chall: Not at that time.

Swent: In the mining industry there is a lot of this secretiveness in the competitive metals. A lot of proprietary data is kept under wraps. They're very guarded about what they show the visitors.

Chall: Are these processes copyrighted or patented? Could that be done?

Swent: Oh yes. Some of them can be and are patented.

Chall: When you were telling me about these men, like Hazen and Bolton and the others, these are scientific people, or at least they're involved with the scientific aspects of mining and uranium. But in terms of working together on the infrastructure, like roads and schools and things of this kind, it would seem to me that they might not be as capable as, let's say, a manager who was not really a scientist.

Swent: Well, let's clear something up there. Marion Bolton was not a scientist. This work at Shiprock by Hazen had been done under his management. Basically Marion was an accountant. But a very smart, capable man with an Oklahoma drawl, a very personable man. In his management at Shiprock, he probably ran into all the facets of management that he had to face when he came down to the much bigger operation in Grants.

Chall: And Knaebel?

Swent: Well, Jack Knaebel was a manager of the old school. He was a manager from, say, the forties and fifties. He was a rough, tough, hard-drinking, good-hearted soul. Technically competent; he knew his mining and geology and kept up-to-date on methods. He just lived a very hard life.

Chall: You were a manager who had a lot of experience as well, but you were not rough and tough. How did you get along with these men?

Swent: You always knew where you stood with Jack Knaebel. As I said, he had tried to keep us out. Then when he saw construction starting

there and his strategy hadn't worked, he called me up one day and asked me to come over to their offices. I did, and the object of the meeting was to say, "Well, as long as you're here and established and we're going to be neighbors, we might as well be friends." He had Albert Fitch present and said in general that they were willing to cooperate on matters in the future.

Just as an example of Jack's character, the first New Year's Eve that we were there, Anaconda invited many of us with other companies to their big New Year's Eve party in their recreation building. There's an old Quonset hut that they used for recreation. At midnight he drew a revolver and fired a number of shots through the roof of the Quonset hut. [laughter] A lot of people left the party right away after that. It got to be pretty much of a brawl.

But early in the game, and I don't remember just quite when, but fairly early, maybe early '58, he was transferred to an iron ore project that Anaconda had elsewhere. Albert Fitch became manager and I dealt with Albert over the years, I think until about 1974. As I said, he was always difficult to deal with, aloof. They had the attitude that they had been in New Mexico first and knew all about it. They were a little difficult to deal with.

Elmer Isern was a new person to Kerr-McGee, primarily a milling man from the tri-state district. He just didn't understand the mining problems that might be faced in Ambrosia Lake as a result of the water. As I said, they were a few months behind us in their stage of development. So we felt we had a little more knowledge and imagination as to what we were going to encounter. He left after a few months. I don't know whether he resigned or was fired or what. He was succeeded by George Cobb. George was a very personable man, an old Kerr-McGee hand from the oil and gas branch. Very bright, but he had no mining or uranium experience. He had been entirely in gas and oil.

Various Mining Techniques: The Problem with Water, the Effects on Management

Swent: He had a fellow named Richard Moe for his mine superintendent, or manager of mines, I think was the title they gave him. Dick Moe had come down from the White Pine Copper Mine in Michigan. This was a bedded sulfide copper deposit. Probably similar in stratigraphy to what they were going to mine in Grants, except for the matter of the water. White Pine was dry. He was going to tackle Ambrosia Lake the same way that they had tackled White Pine, with similar type equipment. Continuous miners or coal-type

loaders, that sort of thing. He wasn't daunted by prospects of water or the effects it would have. Dick was a very strong personality, a very large fellow. His wife was large also and very good looking. They were in college together and were very big people on campus, and then got married afterwards.

Chall: Were they active in their community then?

Swent: They were. Jackie Moe--that's his wife--was very, as I say, attractive and very friendly and very active. We've kept track of her until the last few years.

Chall: Some of these people then became your social friends?

Swent: Yes. But Dick Moe was always a problem, because he just never learned to cope with the water. Eventually Kerr-McGee let him go and got someone else. I think he was replaced by Phil Cross.

George Cobb returned to Oklahoma City somewhere around 1960. That was when Marion Bolton took over. I've given you some of Marion's background. Now Marion had been working in New Mexico. Shiprock is up in the corner of New Mexico, the northwest corner. Most of the mining that they had done had been outside of New Mexico, in Arizona. But nevertheless he had been doing business in New Mexico and knew New Mexico politics. Of course, he was very well acquainted with the Navajo tribal politics, too. But he had had real good hands-on experience in the uranium business.

The manager they sent in to Phillips was a fellow named Armas Ruoho. He was a career Phillips employee. Had no mining, milling, or uranium experience at all. He was assisted by a fellow named Jerry Carr, who was primarily an administrative assistant and knew Phillips Petroleum administration policies and systems very well. He set up all the record-keeping systems and payroll systems and all the paperwork systems that had to be set up, based on Phillips standard ways of doing these things. He had no mining, milling, or uranium experience at all either.

They hired a mine superintendent named Ray Jenkins. Maybe they called him mine manager; I'm not sure what the title was. (There was a lot of title innovation down there.) He had had potash mining experience down in Carlsbad. Potash is a bedded deposit. It's in continuous beds similar to coal. It's just a big bed of mineral; you mine the whole works. You work right in the bed. And it was dry as a bone. When you get water in a salt or potash mine, you've got real serious troubles, because it dissolves your ore out. But again, he was going to develop the uranium ore in the same fashion that he had worked potash.

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Chall: You were talking about Ray Jenkins.

Swent: Ray Jenkins, yes. The only reason we got into the business there, at least with Sabre-Pinon, was because American Metals had given the thing up because they were so afraid of the water. So we were very conscious of it. It was just amazing that these other people weren't.

Chall: Well, they must have really been surprised when they got into it. Because something had to be done about that water, didn't it?

Swent: Yes, well, they had terrible times. I'll go into that a little more.

Ray Jenkins lasted a year or so, and then they had to let him go. I think I mentioned that our plan of development was to go underground with vertical shafts and then to tunnel out beneath the ore horizons and put haulage levels out under them and drill holes up and raise up into the ore horizons and drain the water out. The other two companies were going to just develop right in the ore, which you can do if the ore is dry. But they didn't think the water would bother them for developing in the ore. They were going to use coal-type equipment. The mining equipment and haulage equipment that we bought and they bought was just as different as day and night. We relied on the tried-and-true metal mining equipment.

We got our mines into--this is skipping ahead a little bit. I'll just follow this subject through, though. We got our mines into shape a little earlier than they did. The whole district had severe safety problems. There were lots of fatalities. In 1960, I think, there were sixteen fatalities in the district. Not all of them Kerr-McGee and Phillips, but some of them were. And we had none. Finally, in the last days that George Cobb was there, he came down to see me one day and asked what it had cost us to bring a mine into production. I had to do some ferreting around, but we came up with some figures and compared them.

Their costs were considerably higher, and they were not really into production yet. They had adopted this "developing in the horizon of the ore" method. The equipment just wasn't holding up. Water would carry a lot of fine grains of sand and move into the moving parts of these coal-gathering type machines, which have just little arms that move out over a plate that's shoved up under the ore. These arms are movable, and they push the ore up a little ramp, where it finally gets into a loading mechanism and then onto a conveyer belt.

Well, these things were wearing out very fast because the ore was siliceous. This was a sandstone, and the little fine grains, the water would carry them into all the working parts of these arms and wear them out quickly. The other thing was, they couldn't get much of it because the broken ore was really a thick slurry and it would not go up as well as dry material would. Eventually they had to scrap all of this equipment and they tried then to get into front-end-type loaders. But they were trackless--which is all right--but they had trouble with the bottom because it was wet and slippery. Sometimes they had shale in the bottom, which would be very slippery. They'd just dig themselves down in the shale. And again, they had problems with maintenance. The sand and the grit would get into the bearings of the equipment and wear it out very fast.

Chall: It must have been very expensive to try one and then try another one.

Swent: It was. As a result of this conference with George Cobb, Kerr-McGee made the decision to take the delay in time to deepen their shafts and do what we had done, go out and develop underneath the ore and drain. This cost them several million dollars. I figured at least three million dollars. But in the long run it was to their benefit, and they did it. They recognized the mistake.

Phillips eventually tried to do this also. They had more problems with it because of the geology. The ore was down low enough in the formation that they couldn't really drive the haulage level underneath it, or very far underneath. To get deep enough they would have had to sink down into the Recapture shale, the formation below the Westwater Canyon sandstone. There were severe problems with working in the shale, and then the Phillips people decided to avoid them by not putting their haulage levels that low. They went as low in the Westwater Canyon sandstone as they could and started driving the haulage level, but eventually it broke up into the ore because a haulage level has to be driven away from a shaft uphill. You always drive rail haulage levels with a slight grade, maybe a quarter- or a half-percent grade so that water will run out to the shaft. Then when you're doing haulage on it, when you're running heavy loads of ore to the shaft, you're running slightly downhill. When you're returning with empty cars is when you're going uphill. That's the logic of driving these on a slight grade, away from a shaft.

Anyway, their haulage levels gradually came up into parts of the ore body. It was not as clean-cut and successful an approach as ours had been. But they, again, had to make this change. This was when people like Ray Jenkins and Dick Moe were let go, because they had the problem in that the ore development had been their

idea, and they were stuck with it, and they couldn't change their thinking.

Chall: You must have been the only person who remained over the whole period of time then.

Swent: Yes, with the exception of Albert Fitch. But then they didn't have those problems. They had a dry, open-pit mine.

The big difference between the companies, and this I think is a very fundamental lesson--Kerr-McGee and Phillips had nobody in the home offices that knew anything about mining. They didn't have a single mining person in Oklahoma City or in Bartlesville, Oklahoma. (Bartlesville was the Phillips headquarters.) They were all oil people, oil and gas. Later they acquired mining people. But when they first went into this, they didn't have any.

Homestake had mining people in depth. I had mining experience as manager. None of the other managers, other than the Anaconda people, had any mining experience. They had nobody above them that had mining experience. I had Ab Shoemaker, who was widely experienced in mining, over me. And he had people on the Homestake board that knew mining. Donald McLaughlin had been manager of Cerro de Pasco in South America. Ira Joralemon was on the board and some geologists.

We had mining knowledge all the way up to the board. This was a tremendous difference in attitude and in controls. They could evaluate my performance, as to whether I was on the right track or not, whereas Phillips and Kerr-McGee could not evaluate what their people were doing. They just had to take their word for it. All of them were in the hands of their mine superintendents, literally. And they chose the wrong mine superintendents. It was a very expensive experience for them. Probably between the two companies, it was a matter of five or six million dollars that this experience cost them.

Chall: Obviously with a very good return ultimately, or they wouldn't have stuck with it.

Building Employee Housing

Swent: Oh yes, the business was a lucrative business.

One of the first things that we tackled as a joint group was the housing business. Now Anaconda already had its housing. They

had built about a dozen houses for their top management people at the mill site, near Bluewater. Then they built, I don't know, maybe fifty or so houses in Grants itself for lower-grade salaried people. They didn't really provide any housing for hourly-paid people in any quantity anyway, because when they began operations, they were the first ones in the district. There was enough available local labor that they were able to hire and train them. Their Jackpile Mine was on the Laguna Indian reservation. Part of their lease agreement from the Lagunas included a requirement to employ Lagunas as much as possible. They were already established in their village and had places to live, so Anaconda had not had to provide anything for hourly-paid people.

On the other hand, Kerr-McGee, Phillips, and we were faced with having to provide some hourly pay employee housing. By then all the local people were employed. It was just going to be new people coming in. Eventually Grants grew from 2,500 when Anaconda first came in to over 10,000 in the 1960 census.

Chall: That's pretty fast growth in a few years.

Swent: Yes. And most of it occurred in that '56-'60 period.

Chall: You felt that families were coming in, or single men mostly? I'm just trying to think back on what the early mining communities were like?

Swent: At first it was single people coming in. For instance, I went down there single. Dick Stoehr was there single, and Clyde Osborne was there single. Everybody was there single. You're willing to do that for a short period of time, but eventually you've got to set it up so that families can come in.

Chall: And the same with the hourly workers, too, the miners.

Swent: Yes, right. Fellows will come around looking for a job and they've left their family back in Oklahoma or wherever it is. If they get a job and like it, then they send for the family. You just have to eventually provide, see that the community can take care of them.

The first thing that we had to do in housing was to provide housing for staff people, salaried people, the key ones that would run the business. Several development specialists came in. People who built tract houses would buy up a piece of land and build houses for "spec" and this sort of thing. FHA would not guarantee loans for uranium industry employees to buy houses because the AEC purchase contracts were too short. There were proposals floating all around. They were making them to the companies individually and the companies were dealing with them individually. But

eventually we decided, I think Kerr-McGee decided they would build twenty-five houses for staff. We decided we would build forty-nine.

There were two contractors or two developers that we sort of liked the cut of. One was named Jack Stagner and the other one was a company called Hughes and Company, who basically were represented by a fellow named Chuck Foster, who was very pleasant. Actually, I preferred doing business with him to Jack Stagner. But we decided we'd better split it. Kerr-McGee did the same thing. Phillips decided not to build any houses themselves. But they took up a deal with Hughes for Hughes to build a large number of houses--I forget how many for Phillips, about two hundred or so. Then they would lease these from Hughes over a twenty-year period and guarantee that. So Hughes had a guaranteed lease for twenty years.

Chall: And your company had these houses built? Bought them and then would rent them out? Is that the way you handled it?

Swent: Yes. We would rent them to employees. But the forty-nine that we built were really destined for staff and salaried employees, and we still needed something for housing hourly-pay people. Now one of the things that saved us with the hourly-pay people were the trailers and trailer courts. These just sprang up like mushrooms all over the place and were really what saved our necks as far as how much housing we would have to provide. We made a similar deal with Hughes to the Phillips one, to build a certain number of houses. I think it was 165, that we would lease on a twenty-year basis from them. But the first thing was building these forty-nine. Stagner and Hughes already owned the land, so we didn't have to buy land for this.

Chall: The companies owned the land?

Swent: Well, Stagner and Hughes.

Chall: I mean, the developers.

Swent: Yes. Since Kerr-McGee and Phillips were going to use the same contractors, we got together. The managers decided in principle to do this, and then we had somebody else actually do it. But we decided in principle to mix the houses up by company so that we didn't have a community like Anaconda had, where everybody was an Anaconda employee and you were maybe living next door to your boss and that sort of thing. We decided to locate the houses in such a fashion that no person working for one company living in a house would have a neighbor either across the street, on either side, or in back, from the same company. So we assigned some other people

to go ahead and lay this out in detail. They did, and came back with the maps which we approved, and then construction started.

We had the question of design. I had been in touch with Ab Shoemaker, who said that there were good architects in San Francisco and that the Homestake office in San Francisco would select one. So they selected Skidmore, Owings, and Merrill in San Francisco to be our architects.

Chall: My goodness. This was for the salaried people?

Swent: Yes, for the forty-nine houses.

Chall: Right. Well, that's a fine architectural firm.

Swent: Oh yes, great. But they stayed in San Francisco and made drawings and sent down a set of plans to me. I looked at them and decided that they had too much money in looks and not enough money in livability. Some changes were needed. They had things with blow-through patios and all this sort of stuff, very fancy. I said, in essence, "This isn't what we want. We want to put the money into livability. As far as I'm concerned if they look like boxes that's all right. We want the people to be able to have comforts in the house rather than show on the outside."

So they redid the set of plans and sent another set down. This took six weeks, and we needed these houses. We couldn't get started without the plans. They sent another set of plans down after six weeks. Again, I didn't like them. So I finally called up and I said, in essence, "Gee, can't you get this architect to come down here and be on the site and work with us here? He would see what the conditions are and what we have to put up with. We can make sketches and decide on the spot what we like and what we don't like." So they finally did that. They sent a fellow named Walter Costa down. In twenty-four hours we had agreed on the basic floor plan. He went back and drew up the detailed plans and sent them down to us.

[Tape interruption]

Walter and I agreed on a floor plan in twenty-four hours, and then he went back to San Francisco and took two or three weeks to draw up all the detailed plans. We had some variations, mirror images and that sort of thing. We also had two styles of houses. We had a two-bedroom house and a three-bedroom house. Not very many of the two-bedroom; most of them were three-bedrooms.

Chall: Yes, because many of your people were established with families.

Swent: Then the question came about the number of bathrooms. Of course, the bathrooms add quite a bit extra to the cost of a house. The question was whether one bathroom was enough, or two. I remember Ab Shoemaker was down there visiting and when we were discussing this I turned to him and said, "Well, what do you think about this, Ab?" He said, "Well, there are always emergencies." [Chuckles] So we went with the two-bathroom houses. Kerr-McGee went with one.

Chall: Did you spot your salaried people around with the salaried people of other companies as you did with the hourly-wage workers?

Swent: Well, yes. All of this took place the same way, whether they were hourly or salaried. But these forty-nine houses were mixed in with the twenty-five that Kerr-McGee built, and some that Hughes built for Phillips. All of the salaried people of the three companies sort of lived in the same general area.

Chall: I see. And they all had different architects, so the houses looked different, I presume.

Swent: Yes. They each designed them separately. Kerr-McGee used a design that Stagner had made. As I say, it was basically two bedrooms and one bath, and we went mostly with three bedrooms and two baths. In the long run the Homestake houses were considered the best of the lot.

The architects submitted the plans to me. What I did with them was to pass them out to several fellows like Don Delicate and Dick Stoehr and tell them to take them home to their wives and have their wives go over them. I had Lee go over one set of plans. Oh, they found all kinds of things in the way of details. One of the biggest ones that I remember was the fact that they had provided no back door for the kitchen. If you wanted to dispose of your garbage you had to carry it out through the living room, through the front door.

Chall: How about that! [laughter] Wouldn't you just know that--men hadn't started to take out the garbage yet, I guess.

Swent: So we got those things fixed up, got the plans back with all these suggestions we got from the wives. I evaluated them and told the architects which ones to incorporate. So, we finally got a set of final plans, and construction started.

Then the question of supervision came up. Normal architectural practice is that the architect gets a fee for design and then he gets another fee, usually around 6 percent, for supervision. Well, these guys were up in San Francisco and I was a little dubious about their being able to supervise the construction

from there. They said, no, they couldn't handle it from there. So they subbed it out to an architectural firm in Albuquerque that they knew and made arrangements for them to come out once a week.

I was a little dubious about this coming out once a week to look at forty-nine houses that were all in different stages of construction. We had given, I think, twenty-five to Jack Stagner to build and twenty-four to Hughes. But they were the same plans. They were mixed up in working with each other, you know, within a few feet of each other all the time. I wasn't very pleased with that.

One day when we had already moved into our offices in Milan, a fellow wandered in. They brought him in to me. He was an ex-FHA [Federal Housing Authority] inspector who had been inspecting homes for FHA loans for years. He knew house construction very well. In essence, he said, "I'll go on your payroll for $600 a month and I'll be here every day and I'll watch this construction. You'll more than earn my salary back in what I save you." That was basically his presentation. I was a little dubious at first, because $600 a month sounded awfully high. But I finally went on it. We hired him. That was certainly the very best investment I ever made there. He was absolutely right. He saved us his salary, times over.

Chall: He was on the spot daily.

Swent: He was on the spot daily and saw many things that ordinarily would get covered up, errors and mistakes that would get covered up by contractors. On a once a week inspection they wouldn't have been seen. So our forty-nine houses were very well built. He found a lot more little errors in design that our wives hadn't found. Those got corrected as we went, rather than have them make costly changes afterwards. So that part went very well, and we finally had houses for some of these people to move into. We didn't allocate houses. We gave people some choices. I don't think we had any problems. Of course, we didn't hire everybody all at once. We would hire a metallurgist and there might be four or five days before we hired a mining engineer, and so on.

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Chall: You were about a mile high in Grants, weren't you?

Swent: Grants was 6,500 feet high. At the mine site, at Section 23, our mine collar was 7,200 feet.

Chall: Did your housing have to take into account the kind of temperature that you were going to have, plus all the heavy wind and sand

blowing? When you built them were they insulated in any particular way? Did you have central heating?

Swent: Yes. Each house had a heating system that was a hot air, gas-fired heating system.

Chall: Then did you plant grass and all the sort of things that people like to bring with them, even if you were in a non-grass-type country?

Swent: No, we didn't do the planting ourselves. We let people do their own planting. We did go on a joint plan with the other companies to build concrete block walls or fences between homes and share the expenses, depending on how many sides one company had on each fence. We split this all up and it worked out all right. This then gave people a little more privacy and allowed them to grow gardens as they wished to.

When it started, these fellows Stagner and Hughes had bought about a half a section of land. Once they got their contracts to construct, they just came in with bulldozers and scraped that land off. It had desert growth on it, tumbleweed, Russian thistle, all that type of stuff on it, a little grass. They just came in and scraped it clean. Beneath it was nothing but sand. So for weeks--and I think this occurred in the spring and summertime--for weeks every time the wind would blow, there would be a tremendous dust cloud out of there. Actually, even after the houses were built, the first spring after the houses were built I remember sand piled a foot deep on many driveways. We had one bad windstorm that was just terrible. In fact, we had to send bulldozers in to try to scrape some of the sand out.

Over in the older Carder Eden addition, where we lived at first, we also had sand problems on windy spring days. It was practically impossible to close windows on the sides of the houses from which the prevailing wind came. We had a bathroom with the bathtub located under such a window and many times woke up in the morning to find six or eight inches of very fine sand in the tub.

But once they got established, people began planting gardens, putting in grass and planting trees. All of this gradually settled it. Today they don't have those problems at all.

Chall: And the sewage, the pipes and water and all of that had been taken care of?

Swent: Well, of course, this being a new piece of town, we had to provide for incorporation into the town. That was not difficult. But we had to pave the streets of that area--the contractors did--and put

in the piping, the natural gas piping and the water piping and the sewage piping, and put in the electrical utilities, up to a point. Then the town had to provide the connection.

Constructing the Sewage Disposal System

Swent: Here was where we ran into problems. The town did not have a decent sewage disposal system. The mayor, a fellow named George Dannenbaum, who was an old-time New Mexico and Grants resident, was trying to negotiate some matching funds to build a new sewer plant. This just dragged on and dragged on. We would read in the papers about this difficulty and that difficulty. It got evident that something had to be done to get this off of dead center.

So, at one of our managers' meetings we discussed it. Kerr-McGee had a fellow named Phil Bennett who was kind of a jack-of-all-trades, got into different problems. They had Phil Bennett come out from Oklahoma City and spend a couple of weeks ferreting around, talking with George Dannenbaum, talking with the state people, talking with the federal people, trying to find out what the score was and what the road blocks were. Then he came back and reported to us at another managers' meeting.

I've forgotten what the details of it all were, but it was obviously just the blind had been leading the blind. They needed some leadership. Phil, now that he understood the situation, was told to go ahead and try to put it together so that these matching funds would become available and construction of the new plant could begin.

So he got that solved, and the plant was built. It replaced a little old plant that had been there before that was very bad, just overloaded by now. It was flowing over and was very smelly. The new one actually wasn't ever operated very well. The town did the operating of it. It was sort of a political thing. The guys that operated it didn't know a sewer plant from anything else. As a result, it wasn't well operated. But at least it had enough capacity and at times operated well, took care of things. But it was a smelly installation too, because it overflowed periodically due mostly to just poor operation. But at least we got it solved and underway. That creek down there has been called Dannenbaum Creek because of the smell for years.

Chall: Where did the outflow go?

Swent: It went down into a creek called San Jose Creek, which eventually goes down to the Rio Puerco. That in turn goes into the Rio Grande. We were in the Rio Grande drainage. We were just slightly east of the Continental Divide. The Continental Divide was between Grants and Gallup.

Devising the Delivery System for Good Quality Water

Chall: You had to get good water in there.

Swent: Yes. The water was another real severe problem. The town, when we first got there, had three shallow wells that went down into what is called the malpais. This is the lava flow that surrounds the town, particularly on the south. The wells just went down forty or fifty feet into little pockets where water drained. Then they pumped it from there. They had three pumps, and they would pump it up to a water tank that was way up on the hill and had sufficient head to accommodate any part of town.

One of the problems they had was there was no way of telling when the tank was full. So the pumps would pump away all the time and the tank would get full at two or three o'clock in the morning and overflow. You would wake up in the morning and there would be water running down the street. But then when people started using the water the tank would empty. You would see all this water spilled, and you had no water in your house. People got very mad over this. If you wanted to do laundry or anything, you had to get up in the middle of the night, two or three o'clock in the morning. You could have water then and could do your laundry.

Chall: With children I guess it would be a difficult problem.

Swent: Oh, it certainly was. The other problem was these pumps had not been maintained. They were old, old pumps. Pretty soon they began to fail under this increased demand for water. They began to fail and had to be taken out of service. There were no spares. The town didn't have another pump to put on any of the wells. If one pump went out, one-third of the capacity was gone. So we worked with the town and got them to get a contractor and get things authorized so that they could drill a new well, a deep one down to the San Andreas, the same one that we were drilling to out at the mill sites. It underlaid the entire area, and it was known to be a good aquifer. We wanted to drill a decent-sized well into which they could put a pump big enough that would take care of the demand. We also wanted the town to have a spare pump.

This all took quite a while; it took many months. Roger Madsen, who had lived a few doors from us up in Lead, was assigned to us as our mechanical engineer in New Mexico. Roger and I had worked together on designing that high-pressure to low-pressure heat exchanger that we used on the cooling system in Lead. So I knew Roger. Anyway, he came down. (He still lives in Grants today. I see him periodically.) I assigned him to kind of follow this water matter and try to help them out. He's a Minnesotan and he didn't really know how to get along too well with or how to assess the Hispanics.

I suggested that he try to devise some method where they could have a light up at the water tank and a system that would shut the pumps off when it got full. Well, it turned out that a signal wouldn't work, because the pump operators were usually asleep and weren't watching anyway. [chuckles] Then they didn't want to put the money into an electric system with a float valve that would turn the pumps off, because it was such a long distance and that sort of thing. Most of those things got cured when we finally got the new well drilled. It was successful. It did find water in good quantities, and it was better water. This water out of the malpais from a health point of view was very poor. The state health department was very glad to see the new source of water.

Chall: This water then from the aquifer was fresh enough so it didn't require any chlorination or filtration or anything of that kind?

Swent: No. It had a certain amount of dissolved salts which, once you got used to it, were all right. At first, people coming into the community would have stomach problems with it, get a little bit of diarrhea. But that was mostly from the malpais water, I think. That had all kinds of bacteria, too, because it was not deep enough to be free of bacteria. So that was another problem that we eventually solved. It took about a year or so to solve that.

Chall: Just so I can have an idea of when all this was going on--you moved down there in early '57, didn't you?

Swent: Yes. Lee came down in late May of '57.

Chall: When were you building the houses and worrying about the water, sewage, and all the rest of it?

Swent: Well, this was late '57 and into '58. I think a lot of those problems began to get ironed out in '58. Houses became built and the water problems began to get ironed out, sewage problems began to get ironed out. Just a tremendous amount of activity going on. If you think that I'm jumping from one thing to another in reciting all this--

Chall: No, I don't. I just keep wondering how you managed it, because you were also dealing with so many other matters.

Swent: It was just terrible down there. You never could finish anything satisfactorily. You couldn't even finish a conversation satisfactorily before being called off onto another problem.

Chall: You were also building mines and the mills at the same time. If I read all that Grants material that you gave me in Sharp Bits correctly, everything was going on in '57 and '58.

Swent: Yes. It was a very, very busy time. In addition, we had that hospital fundraising business and the hospital construction going on, beginning in '58.

Expanding the School System

Chall: What about schools? All these people came down with children, I think.

Swent: Yes. The schools were inadequate and they had to be expanded. There weren't enough of them. One of the reasons we had decided to build houses in Grants rather than to, say, build a new community out closer to the mines and mills--that was a possible alternative --was that Grants already presented a situation where you had an organized police force and an organized fire department. Even though it wasn't very good, they had a water system and a governmental system and all that. If we had gone out and built a completely new development we would have had to provide all those things, too. So we chose to stay with Grants, even though it had some undesirable things about it, notably the politics.

Chall: Did your people get into politics? I mean, besides being at meetings, or meeting with the various officials as you had to do. Did any of the mine people run for city government or the school board in order to ensure that your side, in terms of ideas, were always up front?

Swent: Well, not really. We didn't get anybody to do that. But we did get into a lot of politics. We felt we were better off choosing old-time local residents to represent us who had the same ideas as we did--and there were a lot of them--and try to get them elected, rather than to put in new people. Because the politics were such that a new person just stood no chance of getting elected.

The matters of the schools: we started calling on the school superintendent right away. It turned out that the Grants Unified School District, one of the largest school districts in the country as far as acreage was concerned had a tremendous distance to cover --from almost the Arizona line, near a town called Fence Lake, all the way down to very close to the Rio Grande. Along the way there was a town called Las Lunas, which was the county seat. They had their own school system. Then just south of Las Lunas was a town called Belen, which had its own school system. They were small by comparison, small geographically, and with fewer students, compared to the Grants School District. The Grants system had buses running all over the place, to many outlying small schools.

The main problem was just getting enough new schools built and new teachers hired. They managed to rent some buildings for elementary schools, for the first year or two, until new buildings got completed. Immediately they put bond issues for the building of new schools on the ballot. We pushed on that and we got all the people to vote for them that we could, that were voters. The bonds passed, although as usual there was opposition. People would say, well, how do we know the boom will last long enough to pay off the bonds, and that sort of thing. But they got them passed.

Chall: Because there really wasn't any choice, was there, in providing funds for the schools?

Swent: No. But if the bond issues had failed it would have been a real miserable situation. Because down there the law was that when a bond issue fails, you can't put it back on the ballot for a year. Anyway, they passed. So again, another construction campaign began, to build these new schools. They built new elementary schools and new junior high schools. They had just fortunately built a new high school, so the high school didn't have to be tinkered with. I think they did a little expansion to it, but basically they didn't have to build a new high school. It was a modern one.

Paving Access Streets

Swent: One item that we had to work on a little bit was the paving of access streets to these different new developments in town. This was very slow. The city would hire its own paving done when they had the funds, and they were always shy on funds. The last thing to get put in place was adequate paving.

For a while we had to drive over dirt road connections. The streets were all paved, where the new homes were built, but we would have to drive over maybe a short dirt road connection. A lot of the real early timers, like Lee and me, the Delicates, the Stoehrs, the Crosslands, and a few others--the houses that we lived in at first were in what was called, the Carder and Eden development, which had been developed a few years before the uranium boom. It had about fifty or sixty houses in it. We had bought the houses from individuals at prices they couldn't refuse. That was out at the end of two long streets, First and Second Street, which went down through a real low spot about a quarter of a mile across that was inadequately drained.

They were dirt streets, and whenever we had a big rain they became real mudholes. Oh, they were terrible. Eventually Grants had to get in an engineering firm to design an adequate drainage to get that low spot drained over to San Jose Creek. This took several years. Every year when the rains came we were in mud. I guess it was mostly in the springtime and summertime. Just wallowing through mud to get in and out of Carder-Eden. I remember one Sunday when we were trying to get from our car to the Methodist church, which had been built in the low area, our daughter Christine lost her shoes in the sticky mud!

There were days when you couldn't get in and out of Carder and Eden. Fortunately the day--July 20 of 1957, I remember that day--it was the day that Lee and I and our three children left to drive to Denver. Lee was pregnant and we were taking her to Denver for the delivery of our fourth child. We left on the twentieth and it was raining. It turned out to be a dilly of a rainstorm, a terrible rainstorm. People couldn't get in and out of Carder and Eden the next day. If we had waited one more day, we wouldn't have made it. As it was, if we had waited one more day we would have had to probably have the child right there in Carder and Eden, because Jeannette was born on the twenty-fifth. We just barely made it to Denver and got settled in time. But we had very messy stuff in Grants for weeks after. That was terrible.

Chall: Did you ultimately move out of that into one of the forty-nine homes?

Transportation to and from Work

Swent: Yes.

One other item that the companies worked together on--this was maybe a negative development, but we had the Carlsbad experience sort of to go on. Carlsbad, similar to Grants, had several potash mining companies in a given area that was quite a few miles out of town. The unions there had succeeded in negotiating an arrangement for the companies to subsidize a bus service from Carlsbad out to the mines. So the workers rode free at company expense, back and forth. Buses were operated on a regular schedule that coincided with the shift times.

We didn't want this to occur in Grants. We were afraid that we would get met with demands for this. One of the things that mitigated against it was the fact that a lot of these people, the hourly people particularly, lived in trailer courts that were scattered all over. They weren't just right in Grants itself. There were trailer courts all along the highway, all the way out to Ambrosia Lake; there were even some trailer courts in Ambrosia Lake. In fact, eventually a post office got set up in Ambrosia Lake.

But some guy began operating a bus in and out of Grants, out to Ambrosia Lake on a schedule. He got a Certificate of Convenience and Necessity from the State Corporation Commission. We began to worry that this would get worked up into a situation similar to Carlsbad. So we got Phil Bennett back into the business to investigate this and find out who owned it and all this sort of thing. All of a sudden, lo and behold, who owned it but Kerr-McGee. They had bought it up and when they did, they suspended the bus service. It was never really publicly known that Kerr-McGee had bought it. But they just said, well, they were losing money on it, so they closed it. We were relieved of that threat. Transportation never became an issue with labor there. They virtually all traveled in carpools if they traveled from Grants.

Chall: You had plenty of land for parking places.

Swent: Yes, parking was no problem. We had to stagger our shifts a little bit, because at quitting time we had a tremendous traffic jam on the road coming in from Ambrosia Lake. They frequently had to stop at the railroad crossing because of trains. The Santa Fe Railroad operated lots of trains. They had forty or fifty trains a day going through, mostly freight trains.

Chall: I saw one in a picture in Sharp Bits that claimed in the caption that it was a mile long. That would take quite a while to wait at the crossing for a mile-long train.

Swent: Yes. So whenever you had one of those trains go through at quitting time, the traffic got really backed up and it took a long

time to get through that bottleneck. So we began changing shift times by about fifteen minutes. This relieved the problem somewhat.

Chall: Staggered them then in the morning as well as in the evening, or whenever they started?

Mine Workers' Incentives: The Contract System

Swent: Staggered them morning and evening between companies.

One other situation that was of interest that we were sort of the leaders in, was the establishment of what we called the contract system in mining. This was an incentive system that I was very used to, that I consider in metal mining to be a necessary evil, or the lesser of two evils. In metal mining, the labor is done by men working in twos and threes, sometimes just one man alone, scattered around the mine. They have a shift boss. Each boss has anywhere from fifteen to twenty-five of these men working for him. He can't watch each man all the time to see that he's working hard and doing a reasonable amount of work. If he's not there they tend to goof off and not put out a good day's work. And it's very difficult to enforce a work standards.

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There are all sorts of reasons that can be thought up of why they couldn't get that work done. You know, there was a groundfall, or they didn't have the right tools, or a partner got sick and couldn't work for a while. You know, anything. Or there was too much odor of dynamite in the place and they were beginning to get headaches. All sorts of excuses.

So the industry over the years has adopted what they call the contract or the incentive system, where the men are guaranteed their base wages, but they're also given an opportunity to earn a bonus by being paid by the amount that they produce. There are all kinds of units of production. If a man's a timber man, it can be for the units of timber that are set and blocked in place; if he's building a chute, so much for building a chute. If they're breaking rock, it's so much per cubic foot of rock or ton of ore broken.

Chall: Everything.

Swent: We put everybody, as much as we can, on an incentive system. This way if they work hard, generally they can make more than their guaranteed base wages, if they work satisfactorily. We called it a contract system. We used it in Lead. I had been familiar with it in Mexico. We used it in Utah, in the uranium mines there.

So we decided we would try it in Grants. Don Delicate and I worked on it a great deal. Don was familiar with the Lead and Utah systems, and he drew up a manual similar to the one we had in Lead. We went over it. They did one thing in Lead that we had not done in Mexico--in Lead they charged the miners for the explosives that they used. The miners went to the magazines each day and withdrew whatever explosives they thought they would use. This was a material that they were charged with against their contract.

Chall: Any reason for that?

Swent: Don didn't want to do this. Well, it was a lot of bookkeeping and just a lot of things. I insisted that we do it. I had worked in the two places, in Tayoltita where we didn't do it, and in Lead where we did do it. I said, in essence, "Even if you have to just charge them peanuts for the powder--it doesn't make any difference what you charge them, as long as they can have an economic incentive to save it."

The mine in Mexico was always dirty with unused explosives. If people had no economic interest in a half a cartridge, they would throw it around. You would find little half cartridges of dynamite sitting in all kinds of places. They were a real danger. Don didn't want to do it, but I insisted. He graciously decided he would go along with my instructions, and he did it.

Later, about a year later, he said, "Oh boy, that's the best thing you ever insisted on." He had run the mine in Utah and he had not done it there. And he saw the difference in the conservation of explosives and the fact that you weren't all the time fighting these pieces of explosives that were just left around and not taken care of because nobody had an interest in them.

Chall: Yes, the safety factor. What about high grade? I would think you wouldn't have any trouble with that in the uranium mine.

Swent: No, that wasn't a problem.

Chall: Did you have any problem with stealing?

Swent: No problem with stealing, except for tools. The only problem I ever had was years later somebody tried to steal a couple of drums of yellowcake. But that was on a big scale, not minor.

Chall: Gosh! That's a pretty big deal.

Swent: I did have another problem, but I'll come to that. It's later, into '63.

Anyway, we started this contract system. Phillips and Kerr-McGee did not. Now there was another mining company in the area called Calumet and Hecla that was an old mining company. They were an old Michigan copper mining company and had good mining experience, good mining background. Their property was not big enough to justify an AEC contract, so they were in a position of mining a pretty large mine, but having to sell that as custom ore. We were the buyers of it. They used an incentive system also.

I remember overhearing miners' conversations, saying, in essence, "Well, the only two real mining companies here are C & H and Homestake. They're good old mining companies and they know how to timber and they know how to do this and they know how to do that." He said, "These other companies, they're not mining companies." The miners knew the difference.

At any rate, what the contract system does is raise people's wages, the real wages, their take-home pay. Because if they work hard, they get more money than their guaranteed wages. People were constantly leaving Kerr-McGee and Phillips and coming to work for us. Even so, we had a lot of turnover. The working conditions, even with our approach to the water, were miserable.

Chall: Yes, it looked like it.

Swent: It was wet and messy and cold. The average temperature underground was 69 degrees, but in wintertime it really got cold. Finally one day George Cobb called me and said, could I come up to the Kerr-McGee office and talk about this contract system. Well, I got up there, and lo and behold, they had Dean McGee there from Oklahoma City, the president of the corporation. They wanted me to explain to Dean McGee how the contract system worked and why we used it. So I went through the entire explanation and he listened all the way through.

They were, I guess, in the throes of deciding whether to adopt it or not. They were afraid it was just artificially raising wages. I said, no, we got productivity for it. It did increase wages, but we also got increased production. So anyway, we had a long discussion of that. They did finally adopt it. After he left, they did come out with an incentive system similar to ours.

Little by little they got experienced mining people in there. Their mining program changed greatly. They became a conventional

mining company, and a very good one. They got mining people into their staff in Oklahoma City. While Dean Mcgee was there I took advantage of asking him for a contribution to the hospital. I got a check from him for $500, so that was quite a little help.

Chall: Otherwise had they not been quite so open with you about the hospital or about health matters?

Swent: Oh no, no, they worked very well with us on the hospital. In fact, Dean McGee thanked me for the work I had been doing on it.

Chall: This was just a little extra contribution.

Swent: Yes. I just asked him for a personal one.

Chall: That's nice. Never miss out! [chuckles]

Swent: [chuckles] [One early problem that the industry faced was the state legislature. When I first went there it met for sixty days regularly every two years, in January and February, when the governor's two-year term started. In the in-between years it met for thirty days in January and whenever the governor called a special session. We all joined the New Mexico Mining Association, but it soon became apparent that the director of the association could not forcefully present the uranium mining industry problems to the legislators and state agencies without increasing repercussions from the potash and copper mining sectors which were equally big and important to the New Mexico economy. The potash mining severance tax was 2 1/2 percent of the ore value, less the costs of breaking it and hoisting it to surface. Copper, I believe, was set at 1/2 percent. At first uranium was classed with other metals, on which the severance tax was 1/8 of 1 percent. The oil and gas industry had a separate association. The potash and copper industries, having such divergent severance tax rates, believed that each had to have their own lobbyist to the legislature.

The potash industry engaged a public relations man named Jack Sitton in Carlsbad. When the legislature was in session he moved to Santa Fe, the state capital, for the session. In the rest of the year he did public relations work for the potash industry in Carlsbad.

The copper industry in general was made up of one giant operation by Kennecott at Silver City and Hurley, plus a number of much smaller operations in the same general area of the state. They all relied on James Richardson, a public relations vice president of the Kennecott operation, who moved to Santa Fe for the legislative sessions also.

In late 1957 the uranium industry was obviously going to be faced with a move to establish a separate and higher tax at the 1958 legislature, so we decided to hire a lobbyist to live in Santa Fe. Mostly at the recommendation of Anaconda, we hired an old-time New Mexico lobbyist named Richard Grissom. He was well known, but basically at this point, represented no strong source of political power. Direct cash payoffs of representatives for their votes were still common then, but we did not want to engage in that, so Grissom was rather ineffective, and in early 1958 the uranium severance tax was raised as predicted.

As I got better acquainted with Harry Bigbee and his law firm, I found that they did lobbying work, and represented the Mountain States Bell Telephone Company in New Mexico and at the legislature. Harry was critical of our efforts with Grissom and we occasionally called on his firm to help us out on specific issues.

In 1960 we let Grissom go and arranged to hire Ward Ballmer, who was working in public relations for Kennecott in Salt Lake City. He had been raised in New Mexico and went to work for Kennecott there, then went to Salt Lake City. Ward and his wife, Jonette, moved to Grants in early 1961 to be a public relations man for the uranium industry the way Jack Sitton was for the potash industry.][1]

Designing the Tailings Piles and Impoundment Facilities

Swent: Well, one of the things that we had to start out with--and this was not an intercompany-type thing at all--we had to design our tailings piles. Now, you have to understand that in those days there were no environmental considerations, no environmental regulations or laws involved. Tailings were stacked up all over the world from different types of ores. They had never been considered a problem before.

The only place that they were a problem was in Tayoltita, and not because of the stacking but because the company there used to let them go down the river as much as possible. Bert Brown, who was our master mechanic there when we went into the trucking business, found that the tailings in the water were getting into the brake drums of the trucks that went up and down the river and grinding away the brake drums and causing a great deal of extra expense in replacing brakes and brake drums. He got enough figures and facts together to convince Larry Morel, the manager, that we

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[1]Added by Mr. Swent.

should impound them the year round. So we began that in Tayoltita.

This was one of the things that was in the back of my mind when we were considering the problems of the water, underground in Ambrosia Lake. Tailings for hundreds of years have just been stacked up at some convenient place and never considered a hazard. It was so at this time with the uranium. Since then they have become a tremendous controversy. Looking back on it, it's unfortunate that the commotion wasn't made earlier so that they could have been better laid out.

We had two tailings piles, one for Homestake-New Mexico Partners and one for Homestake-Sapin Partners. The way we started them was to take scrapers and scrape off a couple of layers of ground on a flat area, and then use that earth to build a dam all the way around the area, build an impoundment in other words, several feet high. We consolidated the bases with a large sheep's foot and big rollers and everything to compact the bases that had just been excavated, and also to compact the walls of the impoundment that we had created.

The state health people and state water people came down to look at these preparations and some test drilling was done to try to determine whether the bottoms would leak. It wasn't ever clear as to whether they would leak. The state sort of thought they would and our geologist thought that due to the compaction, they would not. Anyway, the state health department didn't object to our going ahead. So we did.

At Homestake-New Mexico Partners we built a rectangular impoundment and at one corner--we treated it as a diamond--at one corner nearest the mill we would pump the tailings out through a pipeline laid along the inner edge of the berm we had built. Here the pipe had a series of holes in it that allowed the tailings to run out and down into the impoundment. Gradually as you do this, the large particles, called sands, settle out fairly close to the pipeline. The water and fines flow on out further down and then form sort of a static pool. Eventually as the fines settle down you will have a little lake of clear water. Generally a means is provided to pump this water back and reuse it. It takes several months to get this established so that you can pump this water back.

Chall: Are the tailings all that kind of fine sediment?

Swent: Yes, the tailings are completely ground material, at least minus 100 mesh. A lot are finer than that.

Chall: Is that right? I see. I always thought they were slightly larger and metallic.

Swent: Well, in some places around the world they are. In the old days, when they used stamps and didn't do fine grinding, why, a lot of the tailings were very coarse. The stamp-mill tails were very coarse. And they didn't move very far.

Chall: But uranium was very fine, and so--

Swent: Not as fine, for instance, as our tailings in Lead. The tailings in Lead were ground minus 200 mesh. But we didn't have to grind that fine in Grants because the uranium was a coating on the mineral grains. It did not penetrate and was not within the mineral grains, the sandstone grains. It was just a coating that had come in between grains. So all you had to do was break the grains apart in the grinding practice so that the surfaces became open to attack by the leach solution.

The Homestake-Sapin impoundment was bigger, of course. But we did the same thing at that one as we did at the Homestake-New Mexico Partners tailings pile. Except that instead of having a fixed point where we discharged the tailings, we devised a movable pipeline which we would discharge at one point and then we would add a pipe to it, 50-foot length, and discharge at another point and keep moving the discharge point around all four sides of the pond, so that the little lake that would build up would be in the center of the pond rather than at one end of it. In the initial construction stage we brought in, under the tailings pond bottom to a point under the center of the pond a concrete pipeline about three feet in diameter. At that point we erected a small, square drainage tower.

As the tailings level rose, we raised this drainage tower. It was about two or three feet on a side, square. It was in the middle of the pond. We always had a walkway out to it from one of the banks, and a rowboat around, in case of emergencies. The operator would periodically go out to the drainage tower each shift. We would raise it with boards. As the water and the tailings in the pond rose, we would raise the discharge opening by just putting a board in it, a little short one. Then the water in the pond would rise until it overflowed the higher discharge opening. As soon as sand began to overflow with the water, then he would add another board. This way we got clear water returned to the mill, and this reduced our need for new water.

[To raise the berm around the tailings pile as the settled tailings and water pond rose after we got into steady operation we devised a method of separating out enough coarse sands to build the berm up continuously. At the end of the tailings pipeline we put in a large tee fitting with a short piece of pipe and a valve on it, so that the tailings could all be dumped at that point if we so

wanted. On the continuing side of the tee we connected a 75-foot-long hose about six inches in diameter. We adapted an old truck frame so that it could be rolled away from the end of the pipe. The hose was then led over the frame of the truck and fed the tailings into a cyclone that was attached to the far end of the truck.

A cyclone is a device for separating the coarse material from the fine material in a slurry by taking advantage of the higher centrifugal force of the coarse material when it was sent spiraling at high velocity down a metal cone about twelve inches in diameter at the top and two to three inches in diameter at the bottom. The spiraling action as the slurry descends through the cone makes the coarse material separate from the finer material, and they can be separated physically and piped away. In the case of our tailings we let the coarse material discharge directly down and diverted the fines to discharge down the interior slope of the impoundment. The coarse material kept building the berm up and the track would slowly be moved forward until the slack in the hose was all used up. Then the tailings were all discharged through the tee connection while a fifty-foot length of pipe was added and the rear end of the hose moved ahead and attached to the end of the new length of pipe, thus creating fifty feet of slack in the hose. The discharge from the tee connection was stopped and use of the cyclone resumed.

The coarse material was used to build the berm up because it carried less water than the fines and drained very quickly and dried into a firm berm rapidly.][1]

As it turned out, the leakage through the bottom of the tailings pile was of some significance. We lost a lot of water, but most of it was evaporation. Tremendous evaporation rates there. We put out pans with water and measured the evaporation rate around the year. We figured that we lost about nine inches a year through evaporation. That is, if you had a lake, its elevation would go down nine inches in a year, just due to evaporation.

Chall: You did have a warm, hot climate there during the summer, is that it?

Swent: Yes, and it's very dry. Even in the wintertime you get some evaporation.

Chall: You never thought of covering it. There was no point in doing that?

Swent: No.

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[1]Added by Mr. Swent.

Chall: What was that water, ultimately, when you found out--I know tailings are contaminated or toxic, but what about the water that you were reusing? Was that pure water, or good enough for your use?

Swent: Oh, it had some dissolved chemicals in it from the process, but then that was a help. Because we would oftentimes cut down the amount of chemicals that we had to put in the new water. We used tremendous amounts of sodium carbonate. In fact, we used so much of it we eventually bought a railroad siding and a discharge terminal that Dow Chemical built. They used to ship it in by railroad car and then discharge it and bring it up by truck three or four miles to our mill. Eventually we bought the terminal from Dow Chemical.

Another thing that we used in great quantity was sodium hydroxide, caustic soda. This was our precipitating agent that we used to precipitate the yellow cake. That also came into the same terminal that Dow built. By buying the terminal we then weren't wedded to one supplier. That was our objective. Dow Chemical was fighting competition. They thought that by building the terminal they would corral all the business. Phillips Petroleum also built an alkaline mill, and they were a second major customer.

Chall: Who was Dow's major competitor in those days?

Swent: The major competitor was an outfit called Frontier Chemicals, which was a subsidiary of Vulcan Materials. They would truck it all the way in, both the sodium carbonate and the caustic soda, truck it in from Texas. On a competitive basis with Dow, and on some occasions at a better price, so we would be buying from them. Eventually Dow decided they weren't really getting the value out of their plant. So they sold it to us. This allowed us to import from whatever company we wanted.

The tailings pond--for years, no one thought we had any problems there. The problems didn't develop until well after I had left. Then, environmental considerations began to come to the fore. Research showed that there was some possible hazard from the tailings, although in my opinion these hazards are grossly exaggerated. You know, maybe we can go into that a little later, when we come to those problems.

Chall: It's a major controversy.

Swent: Finally, on April 26, 1958, the Homestake-New Mexico Partners mill produced its first yellowcake. We organized a very large dedication party. The partners in Homestake-New Mexico Partners were all publicity seekers. We already had some disagreements on

how to proceed, but they wanted this big dedication. So we had it on a weekend, I think on a Saturday. Put up a big speaker stand there and then had--I forget all the speakers. They're probably in that issue of Sharp Bits [May, 1958].

Chall: They are, yes. I've seen that; everyone was there.

Swent: Senator Chavez, and I don't remember whether Senator Clinton Anderson attended or not.

Chall: I don't think so.

Swent: We had the president of the Chamber of Commerce, Cy Anschutz, who had lived next door to us and was a very good friend of ours--not only of ours personally, but of the uranium industry. A number of speakers of the various partners spoke.

Stella Dysart, Ambrosia Lake Pioneer

Swent: Stella Dysart was there. I don't remember whether she spoke or not, but she was there. She was the basic landowner for the Rio de Oro mine. We then started tours through the mill after the dedication ceremonies. I remember taking her through with a group. You know, her background was oil. She had speculated on oil all these years.

Chall: I don't think that any oil came up. From the biography I'm now reading,[1] I don't think so.

Swent: No, she never found a well that produced. But she worked at it for years and years.

Anyway, floating around on the pool at the end of the classifiers in the mill, you could see a sort of black froth. She asked what that was. I told her, "Well, that's a petroliferous material that occurs in this sandstone. It's carbonaceous in nature and it's probably the reason the uranium is there, because carbon is a precipitant for uranium." "Oh," she said, "I always knew there was oil there!" [laughter] She was very pleased to see that.

Chall: Still hoping!

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[1]Stella Dysart of Ambrosia Lake, Merle Armitage (New York: Duell, Sloan and Pearce), 1959.

Left to right: Langan Swent, chairman, Western Valencia Health and Welfare Coordinating Council; Stella Dysart, uranium mine developer; Carroll Gunderson, president, Bond-Gunderson Company; Anthony Cuty, administrator, Cibola General Hospital. Swent and Gunderson watch as Cuty receives a check from Dysart. Dysart's check helped to match federal Hill-Burton funds providing a hospital for the Ambrosia Lake district. Grants, New Mexico, 1958.

L U N C H E O N P R O G R A M

GRANTS & WEST VALENCIA
CHAMBER OF COMMERCE

HONORING

MISS STELLA DYSART

****

Frontier Inn
June 10, 1959

OPENING . . . . . Dr. J. H. FJORD
President

REMARKS . . ."GRANTS PIONEERS" . . . C. G. GUNDERSON

VOCAL SOLO . . . "THE DESERT SONG" . . . . (Romberg)
MRS. R. J. STOEHR

ACCOMPANIST . . . . . MRS. J. H. FJORD

THE RIO De ORO MINE . . . . . RODNEY De VILLIERS
President

HOMESTAKE NEW MEXICO PARTNERS . . . . . CLYDE OSBORN
Mill Manager

THE STELLA DYSART STORY . . . . . GEORGE MASON

PRESENTATION OF MEMBERSHIP CERTIFICATE . . . . . .
TO
MISS DYSART

REMARKS . . . . . STELLA DYSART

REMARKS . . . . . LANGA' S'ENT
Chairman
CIBOLA GENERAL HOSPITAL BOARD

Swent: Yes! I had a number of dealings with her over time. At that time, this was just taking her through.

Some days later somebody informed me that she had hired a security group to watch the shipments of ore from the Rio de Oro mine, and trail the trucks to be sure that the trucks went to the mill. We weighed the trucks at the mill. We had to weigh them in and take a moisture sample, take a sample of the ore to determine its moisture content and weigh the empty trucks leaving. From that we could figure the actual dry weight of the ore. Then the ore would be sampled for uranium content, based on its dry weight. With this data you could figure out how many pounds of U3O8 were in the batch of ore. Rio de Oro was to be paid based on Circular 5 and the uranium content of the ore.

The system that was set up and was fully legal was that the shipper got a copy of all these weights. We had a big truck scale, and it stamped out the weight of each truck as it was weighed, full and then empty. It was on snap-out forms that had several carbon copies. We would give one copy of the full and empty weights to the truck driver who would take them back and deliver them to the Rio de Oro offices. That was their record of the wet weight of each truck. We kept our copies. At the end of the month we would print out a statement of all the truckloads delivered and their weights and the assays and moisture content and the total amount of ore and the average grade, then make the liquidation, the calculation of how much was due, and then pay them.

Well, Stella apparently didn't trust Rodney De Villiers, who was running Rio de Oro, and she had hired these people to trace the trucks and watch that they all came to the mill and that none of them were diverted elsewhere. These security people asked for copies of the weight tickets, and after thinking about it for a while I told them we couldn't do that.

[Date of Interview: January 13, 1988] ##

Chall: When we left off last week, we were talking about Stella Dysart and her superintending or checking on the weighing of ore.

Swent: Yes. She called me and asked me to give her security people copies of the weight tickets from the weighing-in of the trucks. Of course, we didn't have extra copies to give out, and the xerox machine hadn't yet been developed. So I told her that we couldn't do this, but that as a royalty holder she was entitled to copies of what we called the monthly settlements. This was a set of papers drawn up at the end of each month, listing all the truckloads of ore, the weight of the truck as it came in, the weight of the truck

as it went out, the difference in weight and then the results of the moisture sample taken from each truckload and the dry weight of the ore, and the Circular 5 value of the ore.

Chall: What was she concerned about? That you weren't giving her her due?

Swent: No, she was concerned that Rodney was squirreling ore away and not shipping it all to the mill, squirreling it away and maybe selling it to somebody else on his own and taking the money. She said, "I don't trust Rodney." She told me that very plainly on the phone. Not many other people did, either.

Chall: How could you have proved that? Did they know how much was coming out of their mine?

Swent: Well, she was tabulating all the trucks. She had her security people listing all the trucks and accompanying them, seeing that they went to the mill. But she wasn't very pleased with what I told her. When I told her that this would show the wet weights and the dry weights. She said, "But our ore is dry." Well, this is a relative term, of course. The ore was above the water table, and was considered, in general, a dry ore. But even the driest of these ores has 3, 4, 5 percent of moisture in it. Most of the dry ores in Ambrosia Lake ran around between 3 and 4 percent in moisture.

What we had to do is determine the dry weight of the total ore received. Then we would run it through a sampling plant and get a big sample out of it. This would be reduced in size, and finally analyzed in terms of content of U3O8 per ton of dry ore. Then we would multiply that content by the total number of tons of dry ore received, and that gave us the U3O8 content. Then we would divide that by the total tons to get the average grade received. The average grade received during a month would determine the price that would be paid. There was a sliding scale depending on grade.

So I told her we would send her copies of those settlement statements. As I said, she wasn't too happy with that, but that was the best we could do for her. After a while it got going and I called her to see that she was getting the statements. She said she was and thanked me for them, and that was fine.

She was a wealthy woman. She had made a fortune in the uranium business, but really wasn't too knowledgeable in it. The money came from leases, particularly on Section 10, which was in Township 14 North, Range 10 West, which was leased to Kerr-McGee. (I think they called themselves Kermac Nuclear Fuels Corporation, at that time. They went through a number of changes in name over the years.) At any rate, they were actively mining it. They had

leased the whole section from her. She also leased the southwest half of Section 11. Originally she had leased it to a firm called Mid-Continent.

They had assigned the lease to Rio de Oro, and Rio de Oro was operating the mine. It was a small New Mexico company. Most of the stock was principally held by Rodney de Villiers. They were paying her royalties on this, and of course, they had paid--I don't know the amounts--but presumably they had paid some advance royalties down or a lease bonus when they got the leases. That was pretty customary in the business.

She tried to be both a businesswoman and what I called the "grande dame" philanthropist. And she was; she was a good-hearted lady. She gave money to lots of causes. I approached her and had to see her several times about a donation for the hospital fund. I finally got her to give us $10,000.

Chall: That was a pretty good sum in those days.

Swent: Yes. Then she gave a swimming pool to the town of Grants. I'm not sure who thought of that. I think probably the city authorities did, probably George Dannenbaum. I had no idea what it cost, but it was much more than the $10,000 she gave to the hospital. It was built up on a piece of property owned by George Dannenbaum, who was mayor of Grants. He sold that to the city at a good price. It was a terrible site. It was located up on lava flows called malpais. This is terrible to build on. It soon cracked and it had to be repaired. It was a nice pool. It was indoors, an enclosed pool, heated; very nicely done. But as I say, it cracked, the malpais settled and cracked it. They repaired it to some extent, but then it cracked again. Eventually it was abandoned and it became an empty monument to George Dannenbaum. We always called it Dannenbaum Hill after that.

Chall: Well, that's part of the politics.

Swent: I had a number of dealings with her over the years. Some of the others I'll come to in a while.

Chall: Actually her mine, that Rio de Oro, was part of Homestake-New Mexico, wasn't it?

Swent: Well, under the partnership agreement, the operation of the mine was kept out of the partnership. It was operated by Rio de Oro and then they were to ship their ore to the mill and be paid by the partnership on the basis of Circular 5.

Chall: Okay, I see how that works. So they weren't really part of your--

Swent: They were part of the partnership because they participated in the milling profits as a limited partner. But the mine itself was kept out. They operated it themselves.

Chall: Am I going too far ahead by asking you whether you got involved in her contention with Frank Bell and the Phillips Petroleum Company? Or was that just something between them, that major lawsuit?

Swent: I'm not sure what it was. I'd have to bone up a little bit on that one. We weren't involved in it, for sure, or I'd remember it.

Chall: Yes, you would. That's just part of the record that I got out of this book by Merle Armitage. As long as it's not part of your story then we'll just let it stay right there.

Swent: One of the things that she did was just terrible--it caused all sorts of problems in the district. Certain sections of land she had sold as very, very small tracts, down to a sixteenth-of-an-acre tracts. One section, Section 19 in Township 14 North, Range 10 West, she had divided into 6,000 little such tracts. Another one she did it on was Section 12, same township. Section 19 was known to have a very good ore deposit on it. It was inaccessible for years.

What different companies tried to do, and we tried, was to go around and locate all these little owners and lease from them, get a lease based on a standard royalty so that you wouldn't have to keep track of the ore that came out of each little tract. A unitized royalty, I guess you would call it, where everybody was paid a small amount rather than the individual on whose little lot it fell. It was difficult locating these people, very difficult. We had some law firms and land people that specialized in it and were doing this. Phillips was doing it; Kerr-McGee was doing it.

Chall: So it wasn't just Phillips?

Swent: No. Now I don't know about the Bell lawsuit.

Chall: Well, it seems to be related to gaining access to those small land tracts.

Swent: Eventually we threw ours in with Phillips, I think. Particularly those on Section 12--I think there were a few on the southeast quarter of Section 11, which was the extension of the original Rio de Oro mine. But the Rio de Oro mine didn't really mine into these little tracts. It mined on the part that was not complicated by these little tracts. Later, after 1963 and after Rio de Oro had gone out of business, Phillips mined in those little tracts on Section 11.

Still later another mining company owned by Stella and Rodney de Villiers mined on Section 12. Even though she didn't trust him --she was a very changeable woman. She would not trust him and yet she went into new ventures with him. Anyway, they mined on Section 12. By that time Homestake-Sapin Partners had succeeded to the ownership rights of the shaft. Phillips did the mining through the shaft and paid us a dollar a ton, I think, to hoist the ore out of it. The ore came to our mill, and we paid Phillips for it. They paid the royalties to all these little lessors. They had about 200 little royalty checks, some of them for fifty cents or a dollar, that they had to send out every month.

Then on Section 19, that one was never solved. I shouldn't say never solved; it was eventually solved. But nobody ever got enough of these little tracts put together to make a mining venture. So finally, many years later, I think, in the late sixties or maybe even the early seventies, Kerr-McGee went to the state legislature and got the legislature to pass a special act allowing them to mine the section and the State would set up an escrow fund. Kerr-McGee would pay the royalty into an escrow fund --a royalty established by this act as a reasonable royalty. Then any of the landowners that wanted to could claim their royalty. Kerr-McGee agreed to pay it directly to those that they could identify. I think all of the tracts that we had collected there, and all of the tracts that Phillips had collected on that land, all eventually were turned over to Kerr-McGee. I shouldn't say turned over; they were probably sold. Kerr-McGee finally, after many, many years, maybe fifteen years or so, wound up being able to mine that section.

Chall: That's a saga in itself.

Swent: Yes, it really was.

Well, I think I mentioned the dedication, didn't I? I went into that a little bit.

Chall: Yes.

Homestake Partnerships' Ventures are Restructured, 1958-1959

Swent: Following the dedication, we began our very lengthy and involved and dreadfully time-consuming lawsuit in the Homestake-New Mexico Partners venture. The problems we had there were probably in that partnership almost from the beginning. They began to appear before the dedication. We had had some minor problems in some of the

early partnership meetings. Did I mention at one time that United Western, which was the basic owner of Section 32, was putting out what we considered to be misleading press releases in order to boost their stock?

Chall: Oh, no.

Swent: We had called them on this and pointed this out to them in one of the partnership meetings. Alva Simpson, who was president and the chief executive officer just said, in essence, "Well, that's our business. You stay out of it." But what happened with Section 32 was it was geologically a big disappointment. The ore deposit was not as big, not as high grade, as had been expected. Basically Section 32 turned out to be a rather poor investment. The United Western stockholders really got very little out of it, because their profit with the partnership was nowhere near what they had anticipated. So they were disappointed and blaming all this on Homestake. Although I don't think General Hurley blamed it on Homestake. He seemed to realize that it was one of the fates of the mining business. But some of the others tried to blame Homestake.

The real problems began when Rodney de Villiers sold his stock in Rio de Oro to a company called Hidden Splendor. Hidden Splendor was a subsidiary of Atlas Corporation, which was headed up by Floyd Odlum. He had grandiose visions of building a large uranium mining house or company in the United States and controlling the U.S. uranium business, in essence. Atlas had a number of small mining properties in the Moab area and in Utah in general. They had bought the Hidden Splendor mine from a prospector named Vernon Pick for nine million dollars, cash on the barrelhead. I would say Vernon Pick was one of the few prospectors that made it big, that kept his money. He retired on it and didn't put it into riotous living or poor investments or anything else.

Chall: Well, nine million dollars was a lot of money to be handed over in cash!

Swent: Yes. But it was a big mine, it was a good high-grade mine. It had been very much in the newspapers when he first discovered it.

Chall: It was his mine?

Swent: Yes. Anyway, Atlas then, based with the Hidden Splendor ore body and the other properties that they had, was able to get an AEC contract and build a mill in Moab. We were able to sell the Homestake ore from the La Sal and North Alice mines to them over a period of years. Up until then our only outlet had been Shiprock,

New Mexico, to Kerr-McGee, which was a hundred and thirty miles away, whereas the Atlas mill was some thirty or so miles away.

At the time of the building of the mill, Homestake was offered a small interest in it. But Homestake turned it down. I forgot, it was 3 percent or something, based on the fact that we had ores in the district and would be probably having those ores milled in the mill. Anyway, we turned it down, preferring to negotiate a separate contract for toll milling our ores.

[I think I should explain here the meaning of the term "toll milling." Many mills simply buy the crude ore from the producers--generally at a price above mining costs and haulage to the mill. In the case of uranium ore the price was based on its grade and Circular 5 value. The larger producers preferred to pay the mill a fee to cover the cost of milling and a profit, but keep ownership of the ore and to have the mill credit them with the amount of yellowcake recovered. They would then sell this yellowcake to the mill at a price close to the mill's AEC yellowcake price. In a few cases the producer would actually take possession of its yellowcake and sell it elsewhere. This process of milling but keeping title to the ore and receiving credit for yellowcake or actual yellowcake was called "toll milling."

The practice arose from the percentage depletion allowance in calculating federal income taxes. The federal tax law allows a mine operator who owns the ore produced to deduct from profit either 50 percent of the net profit, or a percentage (this varied with the product being sold) of the gross price received for the product sold providing pyrometallurgy (essentially smelting) has not been used. By means of the toll milling transaction the profit or gross sale value of the ore would be calculated on a yellowcake value of close to $8 per pound of the U_3O_8 instead of a Circular 5 value of $1.50 to $5 per pound of U_3O_8, and this usually led to a significant reduction in income taxes.][1]

To continue with Odlum and his Atlas enterprise, Odlum had purchased Hidden Splendor. Then Hidden Splendor purchased Rio de Oro.

Chall: That brought them into your partnership?

Swent: That brought them then into the limited partnership. They were the ones that really caused the major trouble. Rodney de Villiers had been making some complaints before the sale, but the real trouble began with Atlas.

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[1]Added by Mr. Swent.

Chall: For Homestake?

Swent: Yes. They perused all the documents of the partnership very carefully, and also the lease that they had with Stella Dysart. Now the lease required them, and this is standard language in most leases, to produce at the highest economical rate possible. Many people would say, well, they entered into an agreement with a mill. And the mill provided a certain fixed amount to be shipped per month. I forget the tonnage, but it was something like 150 tons a day. But their ore body turned out to be so good that they could produce twice that.

One of the things in the lawsuit was they demanded that they be allowed to sell the excess to somebody else, sell it elsewhere. Homestake took the position that the entire ore body was dedicated to the partnership, and that they didn't have the right to sell ore elsewhere, and that this dedication was included in the AEC contract. The AEC did require dedication of properties to these various contracts, and actually listed the properties from which ore was to come. While the lawsuit was underway, Rio worked out an arrangement to sell excess production to Kerr-McGee, and actually sold and delivered well over 100,000 tons of ore to them. This was a windfall for both parties. Kerr-McGee was way behind in getting their own mines into production, so the Rio ore was very welcome.

Then they perused the assignment of the lease from Stella Dysart to Mid-Continent, to Rio de Oro. One of the requirements that Homestake had originally put on the partnership agreement before its becoming effective was that Mid-Continent approve it and approve the assignment of the lease to Rio de Oro. I wasn't involved in this, but apparently it was done with a great rush in order to try to make the closing deadline for the partnership. Somebody went down to Texas, I think, somewhere in Texas where Mid-Continent was located. They held a board meeting at midnight or something and passed a resolution in a great hurry. But Atlas claimed that this approval was defective legally and wasn't valid, and that, therefore, even their lease might not be valid.

They also raised the issue of competition between the two partnerships for custom ore. We were both required by the AEC contracts to buy custom ore from outside third parties, up to 20 percent of the mill capacity, if the ore were amenable to our process. We could see from what was going on in Section 32 that Section 32 was not going to produce as much ore as had been expected, and that we would probably want to buy more than the 20 percent of custom ore. And Homestake was not able to make up its 150 tons a day that it had a right to put into the mill. So there was going to be a need for custom ore in the Homestake-New Mexico Partners.

We could also see in Homestake-Sapin Partners that there was going to be a period when we were getting the mine started and up to production--the mill would be built early and we wouldn't be up to full production in the mines. There would be a period when we would need custom ores also, because if the mill operated below capacity we would be losing possible cash flow from sales to the AEC. Because the AEC just paid on the yellowcake as it was delivered.

So we began signing up a lot of custom ore suppliers. Most of the contracts that we drew up we made in such a way that the ore could be shipped to either partnership. Homestake had the right to tell the shipper which partnership to ship it to. They claimed that Homestake had a conflict of interest on this, that all of the custom ore contracts should have been signed in Homestake-New Mexico Partners name, and that Homestake-Sapin Partners shouldn't be in it, mostly because Homestake-New Mexico Partners was the earlier partnership. Dick Bokum, as president of Sabre-Pinon, didn't want any custom ore for the Sapin Partnership. Then they had lots of complaints about what we had done on housing, and the--
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--accounting methods that Homestake used. We did have an accounting problem. At first we went three months--this was infuriating--we went three months after we started operations without getting any accounting statements. The accounting statements and cost statements were being prepared in San Francisco.

Chall: At the Homestake offices?

Swent: The Homestake offices in San Francisco. It was three months before we got the first statement. The holdup was some financing charges. Homestake had entered into a bank loan with the Chase Manhattan Bank, and there were some financing charges involved. They weren't sure how to allocate these financing charges to the partnerships. So until they decided how to handle those financing charges, they held up the financial statements. The limited partners complained about that. When they did come out, they complained about being saddled with the financing charges, and a number of other items along that line. I'll come back to the accounting matters later.

The lawsuit was filed actually a few days after the dedication, originally filed, I think, in a New Mexico court. But we got it transferred to the federal district court. Eventually we drew as judge for the lawsuit a Judge Hatch, who had been a U.S. Senator and was the one who developed the Hatch Act. He was very fair-minded. We had no quarrels with Judge Hatch. It took months, of course, to prepare for trial. In the meantime we were served

with--oh, what's the legal term for it, requiring someone to produce documents?

Chall: Subpoenas?

Swent: Subpoena duces tecum, requiring parties to produce all sorts of documents and allowing the litigating parties the right of discovery in each other's files. They had the rights to come and go through our files and copy, or take actually, I guess--the copying business was just beginning. But they had rights to use these documents, then, in evidence.

Chall: Now how much of all that kind of work fell on you?

Swent: Oh, there was a tremendous amount of it. Because I tried to keep very close track of everything that went on. I made sure of all the dates and this sort of thing, when they were going to come in to go through our files. Now, I didn't sit down and go through every file with them myself, other than those in my own desk. I embarrassed them greatly on that. I opened up the desk and I said, "All right, you go right through it here."

Chall: Now to go through your files, they had to go through files in headquarters?

Swent: Yes, they went through the records in San Francisco. I didn't have anything to do with that. But most of the documents that they wanted to review were in Grants. They spent days there actually, going through our general files. They only spent about an hour going through mine, because they were so embarrassed, because I insisted on being there while they went through them.

Chall: I see. What about going through their files? Who did that?

Swent: Our lawyers did that. We had two sets of lawyers. The original partnership agreement had been drafted by a firm of Taylor and Winokur. Sam Taylor was--I had known him, and I later met Winokur. Sam was basically a tax attorney. He had done a lot of work for San Luis Mining Company. That was where I had known him. Homestake retained him to do these partnership agreements because they were primarily drawn for tax purposes. Limited partnerships were drawn up, the vehicle for the investment, rather than corporations, because of the fact that a partnership does not pay any income tax. It merely files an information return. Then the individual partners incorporate that individual return into their own tax returns and calculate their own taxes.

Chall: A shelter?

Swent: Well, it's not exactly a shelter, because the tax is paid. If the

venture is profitable, all the tax-- In fact, there are some disadvantages to this, particularly for a limited partner. Because a limited partner gets his money out of a limited partnership by what is called distributions in cash. The general partner pays out distributions occasionally from cash flow. But these are not considered profit; they're just a distribution. Frequently in a limited partnership that is just beginning to get started, the cash flow is different from the profitability. During the early years you will have a lot of cash going into the venture, so that even though it may be profitable on paper, there's no cash available to make distributions.

Then a limited partner sometimes has to come up with money for his taxes even though he's gotten no money out of the limited partnership. Most of these agreements provide for a minimum cash distribution by the general partner, out of his own pocket if necessary, to the limited partner so that they can pay their taxes. It has some disadvantages to the general partner in that, at the time that he's making the tremendous investment, his taxes are higher than they might otherwise be.

Chall: What other firm was involved?

Swent: The other firm that we hired in New Mexico was the firm of Bigbee and Stephenson. They were from Santa Fe.

Chall: Okay. So you were dealing with the court case now, with Hatch.

Swent: Yes.

Chall: One other question before we get onto it. You had what, six limited partners? I may not be right about that.

Swent: It's something like that.

Chall: Well then, was it only Odlum, Atlas Corporation, who was in this case?

Swent: Oh no, they all joined it.

Chall: So they were all joined against Homestake?

Swent: Yes. Let's see, there was Rio de Oro, United Western, J. H. Whitney and Company, White Weld and Company, San Jacinto Petroleum Corporation, and Clyde Osborne. Now, I should say, Clyde did not join the lawsuit. He was an employee and he was sort of in the middle. So he didn't join it. But the others did, although White Weld and San Jacinto were not particularly active in it. The activity was principally Atlas and Rio de Oro, (a Hidden Splendor

subsidiary), and United Western.

Chall: What made them fall into line, so to speak, with Odlum? Was he the principal pusher in this direction?

Swent: Yes, but as I say, United Western was also dissatisfied with the results of the mine. They saw the lawsuit as maybe a way of getting some additional money to make up for what they weren't going to get through the mine. People like Alva Simpson held stock very heavily in the company. Of course, this was an over-the-counter stock. His personal fortune was just going to pot. So was that of General Hurley. Now General Hurley held a lot of stock in it, but it wasn't his only asset in life. But for Alva Simpson it was basically one of his major assets.

Chall: Yes, that could create a little apprehension.

Swent: I think they saw the lawsuit, or at least Simpson did, as a method of trying to recover some of these losses, and maybe eventually boosting the stock price.

Chall: I see. Well, there you are now in court.

Swent: I forget just when testimony started. But testimony was dragged out over a long period of time. There were fifty-eight days of testimony, which is an exceedingly long court hearing. Judge Hatch didn't have any fifty-eight days available all at once. We would have three or four days, maybe a week of testimony, and then there would be an adjournment until he could find some more time for it. See, this was a civil case. Criminal cases take precedence over that, so he had to keep making allowances for the criminal cases.

Chall: Was this in Idaho?

Swent: No, this was in New Mexico.

Chall: Oh, New Mexico. So you didn't have to travel very far.

Swent: In fact, Judge Hatch's court was in Albuquerque. But I think at one point he had to be in Santa Fe. We did have, I think, one session in Santa Fe.

The Bigbee and Stephenson firm was a Santa Fe law firm. Basically we had gotten hold of them back in the days when we were negotiating for water rights and that sort of thing. Then also they were very helpful in the early days of politics and lobbying in the state legislature, had good contacts with Victor Salazar. Of course, their offices were in the Bokum Building in Santa Fe. The Bokum Building was the one that was owned by Dick Bokum, who

was the major owner and, most of the time, president of Sabre-Pinon.

I had met Harry Bigbee very early in the game. We had a meeting with Victor Salazar and Dick Bokum and Harry Bigbee to go over a proposal on housing that Salazar and Bokum were making. Then we got into water rights with Harry. Harry and I hit it off very well. That's Harry Bigbee. We got along very well for years and years and years. Harry Bigbee had been the attorney who represented General Hurley when General Hurley contested the election. I think it was 1952 when Dennis Chavez and General Hurley ran for the Senate--U.S. Senator from New Mexico--and Chavez was declared the winner. Hurley claimed that it was a fraudulent election.

There is a procedure under New Mexico law for legally contesting an election. Bigbee was his attorney. Harry told me at one time that they had completely investigated--they went through this vote counting business. In those days it was virtually all paper ballots. They didn't have machines yet. New Mexico paper ballots are printed with a number up on one corner. I think it's the upper right hand corner that has a number that is torn off when the ballot is given to an individual. The upper left hand corner is turned down and sealed so that it can't be read. But it has the same number printed on it. In case of a contest, when you want to see if all the people who voted were legal voters, registered, and voted properly, this number can be popped up and seen and the ballot can be identified.

Anyway, they had to do a lot of this in that contest and one of the debacles that came out of it was that it was found that Governor John Sims, who was a Democrat and a leading power in the Democratic party, had voted for Hurley. Of course, it was supposed to be a private ballot, but when this came out in the contest it just absolutely ruined Sims. He was never able to run for political office again. He finished out his term as governor, but he was done for, for having voted for Hurley.

But Harry's investigation showed that this was an exceedingly fraudulent election. However, the U.S. Senate decides on elections, not the state. So they made their report to a subcommittee on elections that had been appointed for this. The subcommittee recommended that Hurley be seated instead of Chavez. Then this went to the main committee of the Senate. The main committee of the Senate also upheld the results of the investigation and said Hurley should be seated. But the Senate as a whole reversed it and accepted Chavez as the winner.

Chall: That's a bit of history.

Swent: Yes, it was very interesting. I used to talk quite a bit with Harry about this, because of knowing Hurley--.

The lawsuit dragged on until, oh, late 1959. It started in early '58. Between all the things that we had to prepare, and special studies that we had to make, and boning up on issues so we could testify--I testified for several days, and Dick Stoehr testified for several days, and Clyde Osborne had to testify. All in all, it just interfered with trying to get the venture going. It just interfered tremendously.

In the long run the judge's decision was that, in principle, Homestake had violated its fiduciary responsibilities to the partners of Homestake-New Mexico Partners, and had a conflict of interest. So his solution was, he ordered a separation of managements. Instead of having one manager for the two ventures, he ordered that there be a separate manager for each venture.

A number of Homestake people, including Ab Shoemaker, thought that it would be good politics with Judge Hatch and the other limited partners of HNMP to name Clyde Osborne as manager of HNMP. He had the limited partners' confidence and the Homestake people thought he wouldn't do anything too outlandish, even though it was obvious that Judge Hatch wanted the HNMP manager to have great independence.

Clyde Osborne was then made the manager of Homestake-New Mexico Partners, and I remained manager of Homestake-Sapin Partners only. There were some other provisions in the settlement--or, it wasn't a settlement, it was a judgment. But basically there was nothing really onerous to Homestake. What the judge was saying in essence was, well, Homestake had some technical violations of its responsibilities, but he imposed no damages and no retributions or anything. He kept jurisdiction for quite a while after the trial ended.

Chall: Oh, I see. So in a sense, Homestake won.

Swent: Technically no, but, in a way, yes. By then things were going better in the Sapin partnership. Except for one major custom ore contract, all of the custom ore contracts were diverted to Homestake-New Mexico Partners. The one that we didn't, was the Calumet and Hecla, which was a fairly large operation. I think I mentioned it before. We didn't divert that one. Their production was large compared to the other custom ore producers. They were a large copper mining firm in Michigan with headquarters in Chicago. Their corporate lawyers did not like the idea of one contract with a diversion clause, so we made two contracts--one for Homestake-New Mexico Partners and one for a higher tonnage for the Sapin

partnership. This did not have a diversion clause so we didn't divert it.

The Problems with the Accounting System

Swent: [This is probably a good time to come back to the accounting matter. Until the New Mexico partnerships were started, most of the Homestake accounting was done in Lead. They had gone to a great effort a few years before to buy IBM machines there and organize a central accounting system. Before that each major department did its own accounting.

When the partnerships began construction, John Hamilton, the Homestake treasurer and chief accounting officer, decided that the partnership accounting would be done in San Francisco. As the workload increased, Homestake bought a second set of IBM machines and rented additional expensive space at their headquarters at 100 Bush Street in San Francisco. All our paychecks were written there and then mailed to Grants. We set up our paydays in Grants twice a month with enough time for the checks to arrive, provided everything worked well. We did, however, have some squeakers when everything didn't work well. Every once in a while the checks wouldn't arrive in time and we had to institute tracing procedures, and wound up chartering a small plane to fly them from Albuquerque to Grants!

The system was unsatisfactory and cost statements, income statements, and the like were frequently late. The limited partners of both partnerships complained, and so did I. Finally, in 1959, we prevailed and John Hamilton agreed to move the IBM machines to Grants. We built an additional room onto the Sapin office building and when that was ready we had the machines trucked down quickly from San Francisco and installed them in the Sapin office.

In San Francisco the fellow who operated them was named Oakley. He was transferred to Grants, but didn't like rural life, and left suddenly without formal notice after a few months. Fortunately, by that time he had trained an understudy and we were able to get along without him.

One unpleasant development in Homestake at this time was the development of a personal feud between John Hamilton, treasurer and a director, and Ab Shoemaker, vice president of operations. I never knew what started the feud, but it fed on itself to the point where the two would not speak to each other. It probably began

when Ab was moved from Lead to San Francisco about the time the final commitment to the Sapin project was made.

I had known John Hamilton from when I worked for San Luis in Mexico for he was also a director of San Luis and treasurer. He was a well-educated man with a feigned English accent. He was a bit pompous, and very subject to flattery. He drank quite a bit and when he did, the British accent and pomposity increased.

Ab was a hard-bitten practical mining man who could express himself well and was brilliant in many respects. He also drank quite a bit, but held it better than John.

The feud lasted for several years, until Ab retired. It was very open and everyone in the organization was aware of it. It was particularly difficult during the litigation. Ab blamed much of it on John's accounting policies, and was furious over the three-month delay in initial statements, and was on my side in the argument over moving the IBM machines to Grants.

During Judge Hatch's court sessions in Albuquerque, the Homestake and Atlas contingents both stayed at the old Alvarado Hotel, at that time still the best hotel in town. Generally speaking, each group avoided socializing with the other, except for John Hamilton. Dick Stoehr and I got quite worried about him because in the evenings he would mix with the Atlas group, including their lawyers, and have drinks with them. One night this got so bad that I went to Don McLaughlin's room and reported it to Don. He went down to the bar and found John expounding to the Atlas lawyers, so called him away and dressed him down strongly enough that this didn't occur any more.][1]

Finally, in mid-1959, the lawsuit came to an end. The judgment was out. So I took a vacation. We went to Europe, took six weeks, because I hadn't had a vacation for quite a while.

Chall: It was well deserved. Did you take the whole family? Or were they too small yet?

Swent: No, they were pretty small. We just took our older boy, Kim. He was about ten. We left the others with Lee's folks in South Dakota.

Separating Homestake-Sapin Partners from Homestake-New Mexico Partners

Chall: What effect did this have on the administration? Let's see, the mills, as I recall, were very close together.

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[1]Added by Mr. Swent.

Swent: They were just separated by a fence. They were in a sense almost integrated. It had very little effect, except that there was one effect on the powerhouse that was fairly significant. The powerhouse had been built right on the line with three engines on the Homestake-New Mexico Partners side and three engines on the Homestake-Sapin Partners side. One of the things that had happened was that in the operation of it, we had not paid too much attention to whose engines were used the most. The judge decreed that we should try to even up the use of the engines, so that each partnership only operated its engines as much as was needed to generate the power that it consumed.

So, eventually we brought one of the engines, one of the 1,000-kilowatt, dual-fuel engines that had been installed out at the Section 23. We found in the long run that we could get along at the mine without it. It was moved down to the powerhouse and put on the Sapin side, so that we could even the account on power. Harry Bigbee for a long time after the judgment used to want to look at this power record every month and see where we stood on it.

Of course, it took many weeks. The decision to move the engine was made when I was gone on vacation. Ab Shoemaker made that decision while I was gone and then ordered them to start making the change. It was not accomplished for several months. It was a big job to do this.

Chall: And water?

Swent: Water we had no particular problem with. We had never really mixed the waters because they were different. The water from the Homestake-Sapin Partners well was much more corrosive than the water from the Homestake-New Mexico Partners well. Although we had tied the two systems together for firefighting purposes, we really didn't mix the waters. For boilers, for instance, we had to have different water conditioning treatment. It would have different effects on the pipes. We just didn't want to mix them.

Chall: I see. So that was no problem. What about your employees, particularly the administrative employees? Now you had to be separated.

Swent: Yes, we had to make some decisions. The way we had run things before was we had a group of employees who were called Homestake-New Mexico division. They kept track of their time and charged

their time to one partnership or the other, depending upon what they did. And sometimes they did work for Homestake. So we had to take this group of employees and break them up and assign them to one partnership or the other. This was particularly true in the accounting area, the general office area, clerical work and that sort of thing.

Chall: What about people like Claramay in personnel?

Swent: She stayed with Homestake-Sapin Partners. Homestake-New Mexico Partners set up their own personnel officer. I'm trying to remember who they set up. I think it was Charles Markosky.

Chall: That's a really major effort then to break this up. What about your office?

Swent: Well, there had been an office built for it, the Homestake-New Mexico Partners mill. So we didn't have to build any new offices. A few people moved, though. They moved out of the Homestake-Sapin Partners offices. The Homestake-New Mexico division people had all worked in the Homestake-Sapin Partners office building. We broke them up, moved some of them down to the Homestake-New Mexico Partners mill office and they worked under Clyde Osborne.

Dick Stoehr went to Homestake-New Mexico Partners. He worked as assistant manager under Clyde Osborne. Homestake really didn't have any control over Clyde Osborne. He had not been an employee of Homestake Mining Company at any time. Now he was a partnership employee, and he was essentially independent. So Dick Stoehr's function was sort of to ride herd on him, watch what he did, and try to influence him to follow the Homestake interests.

This wasn't always easy, because Clyde had been the person that put the limited partner group together. They had relied on him greatly in the past, and that was why they had given him the small interest in the partnership when it was finally put together. His sympathies in many respects were with the limited partners, although he tried to be neutral and probably did as good a job as could be done under the circumstances. But there were times when he and Dick Stoehr had disagreements.

[Dick Stoehr and I both learned a great deal from the lawsuit. The damage that litigation could do to an operation was an eye-opener to both of us, as well as the right of the litigant to go through correspondence files. We both learned to write shorter and clearer letters and memoranda that couldn't be misinterpreted.

Dick and I kept in very close communication during and right after the lawsuit. Even though it was over, there were continuing effects. The judge's decision did not change most of the

underlying conditions. Section 32 mine was a disaster for the United Western stockholders. Atlas was still a participant in the venture. The partnership still didn't have enough ore to justify a 1966 AEC contract. Everything we did we had to get approved in advance by the lawyers. Clyde Osborn took advantage of his independence to raise hourly wages and salaries without careful thought as to the total wage pattern and effects on others. Dick and I were worried that in the long run the San Francisco office people would settle with Atlas and United Western on what we thought would be unfavorable terms.][1]

Dick was also running the Section 32 mine. But this was not a very big job. Eventually Dick complained to San Francisco about his job. I think in 1961 he was finally moved from New Mexico out to San Francisco where he was to work with Paul Henshaw in exploration again, which he had been doing before the partnerships got started.

Chall: What happened to you?

Swent: Well, I stayed on as manager of Homestake-Sapin Partners and just kept my nose in that business.

Chall: Was it simpler? How many partners were there in Homestake-Sapin?

Swent: Just one. We just had Sabre-Pinon Corporation.

Chall: I see. That made it a little simpler.

Swent: Yes.

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Swent: Originally when we first went into the partnership, the president of Sabre-Pinon was Hugh Craigie, whom I had known slightly. He was an old Mexican mining engineer--not Mexican in nationality, he was American, but he had worked in Mexico at San Francisco del Oro, in Chihuahua. He was not a big stockholder in Sabre-Pinon, but he had been put in that position because he was a mining engineer. He had done a lot of the dealing with American Metals. The real major stockholder and power was Richard D. Bokum. He was a very dynamic personality, whereas Hugh Craigie was not an aggressive-type person. He knew his mining, but he didn't have the imagination that Dick Bokum had for the uranium business.

Chall: Was your relationship with Dick Bokum good?
Swent: Well, yes and no. We never got to a lawsuit stage with him, but

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[1]Added by Mr. Swent.

there were times when we had some very vicious arguments with him. Homestake could have saved itself a lot of money in the very early days. At one time, Sabre-Pinon wanted Homestake to exchange Homestake stock for their stock. Homestake figured that they were taking enough risk as it was on the venture, and didn't want to take additional risks. So they turned it down. But with hindsight it would have been a very good thing to have done.

Chall: Ultimately they did buy them out, didn't they?

Swent: Yes, but it was years and years later, 1981 I think.

Chall: Oh, I see, long after you had left. So you had to put up with--

Swent: Well, we didn't have to put up with Dick Bokum all that time. I think Dick Bokum finally retired, or was forced out, actually, as president of United Nuclear. United Nuclear was the corporation at--it was still Sabre-Pinon, but they changed their name.

Chall: I see. So he was forced out?

Swent: He was eventually forced out.

Chall: Who came in?

Swent: Well, the first fellow that came in was named Dave Shaw. After him was a fellow named Doug Johnson. They were much steadier to deal with than Dick Bokum. Dick Bokum was a very aggressive and also, to a certain extent, unscrupulous person. He threw tantrums and pounded the table and all this sort of thing. Many of the critical dealings that we had with him were when John Gustafson was president, starting in late 1960. John simply didn't like this way of dealing. John was a gentleman all the way through. At two or three points he just gathered up his papers and said he wouldn't talk to Bokum until he calmed down, and left the room.

Chall: And Gustafson was also on the board of United Nuclear?

Swent: No, no, he was with Homestake. He was the Homestake president after Dr. McLaughlin.

Chall: Oh. So that means that that was a big support for you.

Swent: Yes. In the San Francisco office, Ab Shoemaker was very supportive, but John Hamilton, the treasurer and chief accounting officer, and Don McLaughlin, the president, would talk to Bokum and not tell me of their talks. We had lots of disagreements with Bokum. One of the problems--it was very demoralizing--as the representative of the limited partner, Bokum had the right to talk

to our people and see our records and all this sort of thing. He would come down and would spend hours just going from office to office and talking with partnership staff employees. But basically he wasn't really seeing records or getting results or that sort of thing, he was just talking down Homestake and telling what a lousy outfit Homestake was and how Homestake was not up-to-date and all this sort of stuff. It was just creating terrible morale problems for me.

Chall: But what was his expectation?

Swent: I don't know what it was at that point.

Chall: He wasn't going to buy Homestake out.

Swent: No.

Chall: Was he interested in getting more money, per se?

Swent: I'm not sure what he thought he could accomplish with that sort of thing.

Chall: Is that right? But he would go out and create waves of difficulties?

Developing the Blackjack Mines #1 and #2

Swent: Yes. The partnership agreement required either partner who developed another uranium interest in the Ambrosia Lake area to offer participation in that interest at cost to the other partner. Now the partnership originally was set up at 25 percent Homestake, and Homestake was the general partner, and 75 percent interest in Sabre-Pinon as the limited partner. So there wasn't much incentive for Homestake to find anything, because they would have to give 75 percent of it away if it was any good.

Sabre-Pinon, on the other hand, did have more incentive to find things, and they did. In about 1959 they found another ore body out in an area near Mariano Lake. They called it the Blackjack #1 Mine. It was on what was called Navajo Allotted Lands. These were not on the reservation. They were lands near the reservation that had been acquired for the Navajos, and they were administered by the Bureau of Indian Affairs. But the actual owners were individual Navajo Indians.

Bokum got a lease and did some drilling on one of these areas

there and developed what they called the Blackjack #1 Mine. They offered an interest to Homestake, 25 percent. So Homestake evaluated it and decided they would take their interest in it. But Bokum insisted that he wouldn't put it in the partnership, that it would be operated as a separate venture and that Sabre-Pinon would operate it, and sell the ore to the partnership at Circular 5 prices.

So they began setting up their mining organization and sank a shaft and started developing the ore body. In the process of this, they began hiring employees away from the partnership. They took shift bosses and even secretaries and this sort of thing. So I finally called Dick Bokum on this. I told him that this helped them at the Blackjack level, but just caused problems in the partnership that came back to hurt them. He understood my point, and from that time on they never took another single employee from us.

Chall: I see. But they still operated it independently?

Swent: Yes. But he gave the word to his organization not to raid the partnership employees. That cleared the air a great deal. That helped a great deal after that.

About this time--the first quarter of 1960--the San Francisco office negotiated a 1966 AEC contract and added the Blackjack properties to it, but this did not mean that the Blackjack properties couldn't be operated outside the partnership.

The Blackjack venture was a great success, but there were some problems with it. The ore was not as amenable to the process in the mill as the Ambrosia Lake ores were. We did a lot of experimenting around to see what could be done to improve the recovery. I think the recovery was somewhere on the order of 10 percent below what we would get with Ambrosia Lake ores. On Ambrosia Lake ores, we would get around 95 percent or 96 percent recovery, whereas with the Blackjack we could only get about 85 percent, as I recall. So we finally found, after a lot of experimentation, that if we performed a roasting operation on the ore, that then we could get almost as good a recovery as we did on the other ores.

By roasting, this meant putting it through a controlled heating process. Not hot enough to smelt it or melt it at all, but enough to change some of the chemical compositions of the minerals that we had to contend with. To install a roasting plant was a major job. This cost, I don't remember exactly now, but it was about four hundred thousand dollars and was going to take quite a few months to do. So we engaged a contractor, Stearns Roger from

Denver, to design it and install it.

In the meantime I didn't want to buy the ore and tie up the cash, because I didn't want to treat it until the roaster was in place. I ran some projections on cash flow. It was a good mine, and they wanted to just open it wide and flood us with ore. Bokum saw this as a method of getting cash out of the partnership. Up to that point the partnership had not been making distributions of cash. The only distribution we paid was enough for Sabre-Pinon to pay its taxes each year. We hadn't recovered Homestake's investment.

Homestake was entitled to recover its investment first, before we began paying out distributions. So Bokum saw Blackjack #1 as a method of getting cash out of the partnership. They wanted to ship 20-25,000 tons a month. He hired people on the basis that if they could ship that many tons, this would boost their stock. He gave them all Sabre-Pinon Corporation stock options and they would all get rich.

Chall: You mean the miners?

Swent: No, the supervisory people. One of them was named Bill Buchecker. He took over a fellow from Rio de Oro named Dave Turberville. They were the principal mining people for Bokum. Bokum also had a shirttail relative named Robert Dodge, who was a pilot and flew him around and engaged in some of the negotiations occasionally. But he was not a mining person, had no education in that field. He had another shirttail relative named William Biava, who had worked with a trucking business in Gallup, I think, and was a very smart and active person. Those were the persons that Bokum sort of relied on to head up his organization.

I started running projections on cash flow and came up with 10,000 per month as a limit. They wanted to ship much more than that. With my projections I showed that the partnership could not maintain its financial position that it was required to maintain under the bank loans that we had, because it would be depleting its cash position.

So, after I had done these and was quite sure of them, I was ready to tell Homestake management in San Francisco. At that time Homestake was beginning to change in San Francisco. Donald McLaughlin had been president, but he was coming up for retirement and they were looking around for a replacement. They hired Wallace McGregor, who had formerly been with American Metals Company. When they merged with Climax Molybdenum, he resigned--because he felt that he might get forced out anyway--and came to Homestake, probably with the intent that he would succeed to the presidency.

He was in charge of the operation, so I called him and told him (I had already told Ab Shoemaker) about the 10,000-ton limitation. This was about as far as we could go. I told McGregor this, and he said, "Are you sure of it?" I said, yes, I was quite sure. He said, "All right, we'll tell Bokum that."

So he told Bokum, and then of course they all came, descended on me the next day, three of them, wanting to know about this. So I gave them the projections. Bokum was pretty quiet about it, but Bill Buchecker and Bob Dodge were openly hostile about it. Bokum looked the projections over, but they're complicated things and it took quite a little while to understand them. He said he'd like to have their auditors look them over. He wanted copies. So I gave him the copies. He took them off to a man named Howard Wardlaw, who worked with Peat, Marwick, and Mitchell in Albuquerque, and had him review them. I knew him; he had done some of the auditing work for the partnership. He couldn't find anything wrong with them. So they finally agreed to it. But they were really, really upset over this.

In the meantime we went ahead and authorized the roasting plant. They did send Hugh Craigie down to try to talk me into treating the ore. I said we would take the 10,000 tons a month, but I would stockpile it until the roasting plant was in. He came down and tried to talk me into treating the ore on the basis that the 10 percent difference in recovery in the long run wouldn't make any difference, because eventually the tailings would be re-treated and we would recover it. We had a long and interesting argument, but I didn't agree to it. We did follow the stockpiling proposition until the roasting plant was in. Then we went ahead and played catch-up. I don't remember just quite when the plant was finished, but I think probably in early '61, somewhere along in there.

Chall: And it turned out to be a good investment?

Swent: The roasting plant?

Chall: Yes.

Swent: It worked, yes. They eventually worked Blackjack #1 out, and then we had no more use for the plant. But it had paid for itself. They also had developed another little property called Blackjack #2, which was a few miles away. That was much smaller and never as good as Blackjack #1.

Chall: The same quality of ore?

Swent: Yes. It needed the roasting treatment, also.

Chall: There's a lot of investment in putting in even the roasting treatment, so you would have to be sure that it would pay off.

Swent: Yes. Well, they had the reserves in the Blackjack #1 mine. We had Dick Stoehr go look at it. He looked at their drilling results. Then we had our chief geologist, Ted Rizzi, go out and do what we called check drilling; that is, drill some holes near some of their holes and see if they got the same results. We still kid Ted Rizzi about this one. He drilled right in the middle of the ore body; he drilled an absolutely blank hole. It didn't have anything at all in it. [laughter] We told him he was the only guy that could drill a blank hole in the middle of an ore body! But in general they did verify the results.

I think maybe--I'm just kind of jumping around from subject to subject.

Chall: Well, it's all sort of related.

Swent: I'm trying to take this topic by topic and not make it sequential, but in many ways it also has to be sequential.

Chall: That's all right. I don't think there's any problem.

Part C: Political and Civic Activities

The Swents Become Active in State and Local Politics, 1958-1966

Swent: I think I can go now to a little bit of the New Mexico politcs. When I was working in Lead, before coming to New Mexico, I had been a member of the Kiwanis Club of Lead. One of the projects that the Kiwanis Club had was a non-partisan, get-out-the-vote drive each year when there was an election. It was just a group of people who would offer rides and put out telephone numbers where people could call to get a ride to take them to the polling place and this sort of thing. It was completely non-partisan, just an effort to get more people out to vote.

When we went to Grants we thought this was a good thing to do there, too. So Lee started to push this in the 1958 elections. They were the first elections that were held there after we arrived. We came down in '57, which was a non-election year. New Mexico governor elections at that time were every two years. So

the governor and the congressional elections were in the same years. We got into this in the '58 election. I'm not really quite sure why. We were registered as Republicans, but hadn't really done anything.

Chall: Whose offices did you set up this get-out-the-vote campaign in?

Swent: I think it was just a personal one. I was not a member of a service club there. I just didn't have the time. I was asked to join Kiwanis there, but I just didn't have the time to do it. So I stayed out. Lee was doing most of this work. Somebody came along and asked her to be precinct chairman for the Republican party in the precinct we lived in, which was called Precinct 23. We talked it over for a while and she agreed to it. Under the New Mexico election laws, a precinct is supposed to be about 600 voters. If a precinct gets larger than that, they're supposed to create new precincts.

New Mexico Political Practices

Swent: To explain another thing that she did in connection with this, I will have to go into the New Mexico registration system. In New Mexico you could register to vote at the county seat, the town of Los Lunas. In the case of Valencia County, where we were residing, that was 60 miles away. It represented quite a drive, 120 miles round trip to go down and register. So people in general didn't do it. But you could also register by going to a notary public. Any notary public was supposed to have the forms and could register you. The notary public kept all the forms and was supposed to mail them in to the county clerk at the county seat.

What we found out was that if you registered with a notary public who was a Democrat and you registered as a Republican, you ran a very serious risk that your registration never got sent in. Now what they were supposed to do is send the registration into the county clerk. The county clerk would mail you back one copy, which you kept as confirmation that you were registered. But a lot of the Democratic notary publics just didn't send in the Republican registrations. They would only send in the Democratic ones.

When we came to register, after we had been there long enough, we made sure we went to a Republican notary public, a very elderly gentleman, very nice gentleman named Cy Rouse, who was an old, old-timer. He was in his eighties by then. He lived into his nineties. He registered us, and ours went through.

But when Lee learned this, she got herself a notary public appointment and started registering people and sending them in honestly. I think as a result of this and the get-out-the-vote business, she was asked to serve as the Republican precinct chairman for Precinct 23. This turned out in the long run to be a tremendous job. It was a presidential election year; there was a tremendous influx of new people, lots of registrations to be had. And they did not subdivide the precinct until after the election. It just grew and grew and grew, and we had over 2,000 registered voters in it.

Chall: In your one precinct?

Swent: Yes.

Chall: With paper ballots?

Swent: With paper ballots, yes. It was tremendous. So anyway, she accepted and we began getting into the nitty-gritty of the politics. Then we took a course that the Chamber of Commerce offered. It was sponsored by the U.S. Chamber of Commerce, and it was a six-week's course meeting once a week. I think it was called "Action Course in Practical Politics." We both took it and completed it. There were about a half-a-dozen other people that took it at the time. Some of them Democrats, some of them Republicans.

Then we also had in New Mexico a justice of the peace system. Justices of the peace were elected by precincts. The justice of the peace was really the first court. Traffic cases and that sort of thing all get referred to the justice of the peace. If it's more than he can handle, then he bucks it up to a court. But almost all first hearings are before a justice of the peace. The justice of the peace in Precinct 23 was Greek or of Greek descent, ex-World War II veteran named Angelo Sakelares.

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Called Sak, for short. He had been on the Bataan Death March. He was one of the few survivors of it, had been prisoner-of-war of the Japanese and had a mental breakdown. He used to claim with a great deal of pride that he was a certified crazy. He had papers from the army certifying that he was crazy. But he was crazy like a fox. And he was registered as a Republican. He had been elected justice of the peace in Precinct 23.

One of the main problems that we had there was that he was being opposed by a fellow named John Horacek, a Democrat, for justice of the peace. Normally justice-of-the-peace positions are

supposed to be non-partisan, but in this case it really wasn't. The Valencia County Democratic organization was headed up by an old, old-time politician named Filo Sedillo. He was a very cagey and very capable operator and had delivered the Valencia County vote to the Democratic party for years.

Lee and I thought, rather unrealistically, that with a big influx of people into Grants, particularly in our community, in Precinct 23 where most of the supervisory employees of the various companies and their families were living, that this should be a normally conservative group, probably more inclined to vote the Republican lines than Democratic lines. But we didn't really take into account that most of them came from Oklahoma, which was basically a Democratic state, or Texas, which was a Democratic state. A lot of them came from West Virginia, which is basically very Democratic. Most of these people weren't doing much thinking. They were just registering the way their fathers had registered. We were really surprised at this.

Lee found this out in the course of the registrations. Then she set up the Republican Women's Organization. As things went on, I was requested to serve as the treasurer of the Valencia County Republican Party, and I took that on. This meant going around, soliciting donations from anybody we could get them from.

Chall: Goodness, in addition to the other work you were doing with the partnership!

Swent: We had precinct conventions at which we elected delegates to the county convention. At the county convention we elected delegates to the state convention, and we went to the state convention in Santa Fe. Lee and I were both elected all the way through, and we went on up there. In 1960 there wasn't much of a problem. It was Nixon, Lodge; there wasn't really any opposition within the party to his nomination. We went through. Sakelares was also in on all this.

The national committeewoman from New Mexico was Mrs. Floyd Lee. Her name was Frances. They lived on a ranch, the Fernandez ranch, out near San Mateo. It was an old, old Spanish land-grant ranch that's still in existence. Floyd Lee and Frances Lee had been very prominent Republicans in the state for years and years and years. We got to be good acquaintances of theirs and enjoyed their company very much.

Harry Lee was of my generation, near my age. He was their son. He was a pilot, flew his own little plane. So he would fly the Lees in and out of Albuquerque. They built a landing strip at the ranch and he would fly them in and out. They spent a lot of

time in Albuquerque. She had to go back East, particularly to Washington, for Republican National Committee meetings very frequently, so she was very, very active. Lee also was acquainted with her through a women's group that she belongs to called PEO.

As things bubbled along in 1960 before the election, there was quite a registration drive put on by both parties. Registration closes thirty days before the election. The county clerk makes up the official list of the registered voters, by precincts. These lists are supposed to be available to the precinct chairman. In fact, anybody that wants them can get copies.

Chall: So you can watch.

Swent: So you can start knowing who you're supposed to get out to vote. When we got these lists for Precinct 23, we had a terrible mess. It turned out that lots of people who were living in Precinct 23 were registered in Precinct 24, even though their registrations had been sent in as 23. These were all messed up. It finally dawned on us that what the county clerk was doing--you could see the fine hand of Filo Sedillo in this. The county clerk was Democratic. They were segregating, systematically, people that they thought would vote for Sakelares for justice of the peace and putting them into a precinct where they couldn't vote for him, where he wouldn't be on the ballot.

Chall: My goodness! It takes vigilance to see all that.

Swent: Well, there was nothing we could do about it. It was done. So the election came in 1960, and of course, it was a very narrow one for Nixon. He lost the state by around 2,300 votes, I remember, out of something on the order of 400,000 votes cast in the state. I was a counter. I was designated as one of the Republican counters in Precinct 23. We had these paper ballots and an exceedingly large turnout. We counted all night long; counted up until five or six o'clock in the morning, I think.

We were all very wary of each other--the Democrats watching the Republicans and everything, and trying to keep it all fair and square. Just as we were about to finish up, but not quite finished, word came in that Nixon had conceded the election. The reaction of the people there was the most amazing--here we thought we were all, you know,balanced ideologically, that we had Republicans watching Democrats. It turned out that almost everybody there was for Nixon. They were all very disappointed. You could see it; they obviously showed it.

The precinct came out very close. I don't remember whether it went Nixon or Kennedy, but it was very close and there was a very

large Republican vote there. Theoretically we got 90 percent of the Republican votes. We didn't get that large a turnout from the Republicans. What it meant was that a lot of Democrats had voted for Nixon.

Chall: What about the judge?

Swent: Sakelares lost. He went way down, because this strategy of isolating him had worked. I pointed it out to him and urged him to file a contest on it, but he chose not to. Because contests cost money. But he had the facts. The Republican candidate for governor was Edwin Mechem--not to be confused with Mecham in Arizona today.

Chall: Yes, I've seen those two names and wondered whether they were related, but they're not?

Swent: No, they're not. Ed Mechem had been governor before, had been defeated by--I'm not sure. The terms are two years, and you could succeed yourself once. I think he had served his four years. Now he ran again. He had been out of office for two years. And he won by a small majority, about the same as the number by which Nixon lost. This was not too much of a surprise. The lieutenant governor, Tom Bolack, from Farmington, New Mexico, won by, oh 200-300 votes. This was really a major victory, because although Mechem had won in the past, two times, he had never carried a Republican lieutenant governor into office. Mechem was personally popular, but never enough to get a lieutenant governor in. So anyway, Tom Bolack had carried, but immediately the Democrats filed a contest on this and retained Harry Bigbee to represent them on it.

At the counting booth--to go back to the polling place where I counted--we knew that it was a close election already from the radio reports we had heard. We had the advantage, at least by having worked so late, that results were coming in by radio. So we sat on the ballot boxes. We were supposed to put all the ballots into the ballot boxes and lock them. They were supposed to be returned to the county clerks in Los Lunas. So after we locked the boxes we sat on them. Lee came down and arranged for a pickup truck to take them down to Los Lunas. We went with them, because ballot boxes had a habit of getting lost in New Mexico. So we went with them and personally saw that they got to the county clerk's office, with all the tally sheets and all the records and everything.

The county has--well, it's in the state--they have what they call a canvass. Ten days after the election each county commission meets and canvasses the vote. It's a real formal process. They

sit down and go over the big tally sheet with all the precincts in the county listed, and all the candidates listed. Then each tally sheet from each precinct is examined and totalled and the totals taken off and put on this big tally sheet, for each candidate in each precinct. So we went down and attended this, and managed to keep them from taking 100 votes away from Tom Bolack. At some point they claimed that there was a mistake of 100 votes in some precinct and they were going to lower Bolack's tally by 100. We questioned it and they looked at it and said, "Oh no, I guess it's right after all."

Thirty days after the election they had the state canvass. The state takes all the county canvasses and tallies them into one master tally for the entire state. We did not go to that. We thought that probably was conducted under better conditions than the one in Valencia County was. Valencia County had a reputation for very dirty politics, particularly under Filo Sedillo.

One of the problems with the registrations in New Mexico was that although you had the filtration of registrations by the notary publics, the converse was that you could register a monkey if you wanted to, because you didn't have to show anything to prove that you were an American citizen or had lived in the state long enough or in the county or precinct long enough, or anything else. People that registered you just took your word for it. You did have to sign it, but if you wanted to sign a monkey's name, you could.

You had to give an address. By law you were supposed to give a street address. You were not allowed to give post office boxes. But many, many people were registered by post office boxes, or just by town. What we found was that many of these--not many, but all you need is one or two per precinct--they would put in somebody with a very common name, with a vague address that you couldn't check on. It would be a Hispanic name always. They didn't use other names. Somebody would vote for these people. Because all you had to do when you voted was go in and say, "I'm John Doe," and they look it up, registration for John Doe, so they let you vote. This gives you an advantage of one or two votes per precinct.

Another one that they worked--felons are not supposed to vote. Of course, if you're a felon from another state, there's no way that New Mexico knows this. So a lot of felons did get to vote. We had one that was an ex-felon who was not allowed to vote, who was a Homestake employee. He had not been on the registration list. I checked to see that he wasn't, and he wasn't, because I knew he was a felon. He wasn't on the list, and yet when the voting was done, I noticed he had voted. We tried to figure out how this could have happened, because you have to be registered to vote. There was no getting around that.

However, if you weren't on the voting list, but you had your copy of your registration, then the officials would allow you to vote. They had to; that was the law. This fellow had been registered and not put on the list because he was a felon. But he showed up with his receipt and was allowed to vote.

Chall: Pretty nice work!

Swent: Yes. And of course, he was registered as a Democrat. He was from West Virginia. We eventually had to fire him, but that's another story.

As a result of the contest that was filed against Tom Bolack, each party had the right to name precincts where they thought there had been fraud or some reason why there should be a recount or a contest, which involved much more detail than just counting. A recount is just a simple recount of the ballots as they are. You don't open anything, you don't change anything, you just recount them. In a contest, you go into it deeper. You go into whether there was any fraudulent action, if all the people were properly registered, and that sort of thing. It's much more in depth. So each party had the right to name the precincts. It's very expensive to do a recount or contest in every precinct of the state. So you name those that you want, where you think there was fraud.

This was for a contest, so we named all the precincts in Grants. We just named them. The real reason that we had was because of this mix-up of registrations because of the justice of the peace thing. Actually, I realized, even at the time, that this was a legality and that probably, as far as the justice of the peace was concerned, that was a valid objection to the election. Sakelares, the candidate for justice of the peace, could have won a contest on that.

But I didn't think it would hold for lieutenant governor, because it didn't make any difference what precinct you were in, as long as you voted for him. But we just did it anyway, to put something in, thinking that it would lead to delay. It was only a two-year term and the whole thing might take two years.

The Democrats didn't really push the contest very hard. It dragged along. It never really was done. Harry Bigbee later said that the reason that they had filed it was just to draw the attention away from Nixon's narrow loss, so that the Republicans would be more interested in defending their lieutenant governor and governorships than in trying to re-open the question on Nixon. Because I think it only took two states. Chicago recounted informally, and Nixon actually won Illinois. If we had been able

to reverse it in New Mexico, that would have changed the 1960 election. It was that close.

Chall: Actually it was Nixon who decided that he didn't want to go through with it.

Swent: He decided not to, right. So since he didn't, why then the Democrats didn't really push the business on Bolack. And Bolack served out his full term.

[Date of Interview: January 22, 1988] ##

Chall: Last week we were working on the 1960 election or moving into the 1962 elections.

Swent: Yes. We pretty well covered the 1960 ones.

Chall: So we can go on. When I read the book that you gave me, Sagebrush Lawyer, I realized that though he was writing about earlier days, this was a pretty open, Wild West country.[1] Politics hadn't really become very sophisticated even at the time you moved to New Mexico.

Swent: They were pretty raw.

Chall: Yes. So at the time you came in a great transition had to be made, caused by bringing in industry and all the people. Did you find that there was much difference between the local Republicans and the local Democrats, as far as the way the city or the state was being run? You brought in Republican concepts and probably organization that you had known in other places. Others brought in their Democratic party concepts that they had known, as you said, in other places. But what you found on the scene, was it much different?

Swent: The scene that we operated in was Valencia County. And yes, there was a great difference between the Republican and Democratic organizations. The Democrats were very consolidated. The county chairman was Filo Sedillo, who lived down in the Los Lunas-Belen area. He was very firmly entrenched. They couldn't get him out. There were people in the party that would have liked to have gotten him out. He was a virtual dictator in the county; he ran things. They went through the formalities of having precinct meetings and a county convention, but he dominated it all. The result was, they

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[1]Arthur Thomas Hannett, Sagebrush Lawyer, New York: Pageant Press, Inc., 1964.

did what he wanted. A lot of the new Democrats that came in wanted to get rid of him, but they weren't able to. He lasted for many, many years.

The Republican organization was quite open at that time. I suppose in the past it had fallen into similar conditions at some time or other, but at this point it was very open. Why we were able to work and make advances as rapidly as we did within the organization is that it was quite open.

Politics and the Uranium Industry

Swent: To give you an example, though, of how politics still worked in the state, I have to go back to 1958, and that's backtracking a little bit. But in 1958 the Democratic candidate for governor was John Burroughs. This was a two-year term at that time. They've since been changed to four-year terms. He had a fundraiser from the eastern part of the state named Fats Leonard.

Chall: "Fats" being his nickname?

Swent: Yes, nickname. I forget what his real name was. In the fall, Leonard approached Marion Bolton, who had had several years of experience in New Mexico already, up in Shiprock. I don't know whether Leonard already knew Bolton or not, but anyway Bolton was now down in Grants. Leonard approached him and wanted Bolton to raise $50,000 as contributions to Burroughs's campaign fund from the uranium industry. Marion Bolton brought this up at one of our managers' meetings and we discussed it. Basically none of us wanted to be party to this. We suggested that Bolton sort of stall and not reply. But after two or three weeks, Leonard called back and started pushing Bolton some more. But through discussion the amount was lowered to $25,000. The promise was made that if we came up with this that we could name the mine inspector and there would be no increase in severance taxes.

So Marion brought this back to the managers' meeting. Basically all this was shocking to me. I hadn't, even with my Mexican experience, seen this sort of thing. The managers again decided they didn't want to go along with this, and as the election date drew near, Leonard started putting on more and more pressure.

I talked with Harry Bigbee about how to handle this. Harry was a veteran of many political wars. He knew the New Mexico political scene and where everything stood very, very well. He didn't think we should pay this, either. So his advice was to just

stall, that Bolton should disappear. Apparently he was the contact person, and if Bolton were out of the state or on a trip or something for a while, why, Leonard would be unable to get a final commitment before the election.

So this worked. Marion disappeared from view for a few days before the election until it was over. Burroughs won the election for a two-year term. After the election Leonard came back to Bolton and wanted $25,000 to pay Burroughs's campaign debts. The same thing, same deal, name the mine inspector and no increase in severance taxes.

Burroughs had campaigned on a program or platform of no increase in taxes, which would include the severance taxes. So I called Bigbee and talked to him again about this. The inaugural date for the governor is the first of January. They had a big inaugural ball in Santa Fe on January 1, and then the governor-elect or the new governor gives a speech which is a policy speech, setting what his policy is going to be. This goes to the legislature. The legislature convenes a few days after that.

Harry, in essence, said, "Stay out of touch with him. He campaigned for no increase in taxes. Forget the mine inspector. You don't want to name him anyway. As far as the severance taxes go, to raise them would be an increase in taxes, against his campaign promises. So stay out of sight until he has given his inauguration speech. And once he has committed himself in his inauguration speech to no increase in taxes, then you can tell him no, you're not going to give him any money." So we did that and wound up paying no contributions. But it was quite an eye-opening experience!

As Burroughs's term went along, we had to deal with him two or three times. In 1959 and 1960 there were a large number of fatalities--I think I've mentioned this before--in the Ambrosia Lake mining area. In 1959 I think the number was twelve fatalities, and in 1960 it came up to sixteen. This is a tremendous number of fatalities. The number of fatalities per million manhours worked just rose drastically. This was while most of these mines were being developed. So in 1960 as the campaign for Burroughs's re-election began, the Albuquerque Journal, a daily newspaper, began using the fatalities in the mining business as a political issue against Burroughs, and gave it a lot of publicity. So to keep the matter out of politics, because it couldn't do him any good--if it got into politics it would just be against him--Burroughs announced that he was appointing a special governor's committee on mine safety to investigate the matter.

Chall: Oh, that was the reason. I had that question for you, why that happened.

Swent: So he appointed--I can't find my file. I thought I had kept the file on that, but I was looking for it yesterday and can't find it.

Chall: I found a newspaper article in the material that you gave me, that in 1960 Governor Burroughs formed a special governor's committee on safety in the uranium mines. I thought it was targeted at Grants.

Swent: It was, specifically to Grants.

Chall: So that was the reason for the committee?

Swent: Yes.

I was appointed to that committee. We had had a very good safety record and had no fatalities at that point. We had our first one a little later, in 1960. As I remember there were seven members on the committee. They were labor and management people. I was the swing vote. In the long run the findings of the committee were whatever I would agree to.

There were two schools of thought. The other companies were strong for, and wanted the findings to be, that the real cause for all this was the financial incentive that the AEC had put into each of the contracts to get into production early. I took the position that, regardless of that, the companies had a responsibility to operate safely, and that this was their own responsibility and they weren't doing it.

This didn't ride very well with the other companies. I got great pressure, especially from the Kerr-McGee organization in Oklahoma City and Marion Bolton, to go on the AEC reasoning. I didn't want to do that, and they didn't want a finding that it was just industry's fault. We finally, after several meetings, came out with a compromise which referred to both matters.

Mine Safety

Chall: Isn't that interesting? I've never even considered a problem like that needing that kind of political compromise. But in fact when you told me about the numbers of fatalities and injuries, they were in other mines?

Swent: In other mines. We didn't have one until very late in 1960. Out of those twenty-eight fatalities in two years, we had one. It was very late in 1960 when we had our first one. That in itself led to

another crisis. The accident was sheer stupidity. A man named Marion Fair was pushing some rocker dump cars. These are cars that are tipped sideways by the operator to empty them. They have a U-shaped body and you tip the body sideways and it dumps its contents out. Then you roll the body back. They're called side dump or rocker dump because the U rides on a rocker that tilts it.

He came to dump these into an ore pass near the shaft, in the Section 25 Mine. Apparently he couldn't get the first car to tip, because the gears between the body and the main frame of the car were not meshed properly. So he got a crowbar out and put it between the teeth of the gears to try to snap them into place, and the crowbar then extended out over this open ore pass down which he was trying to dump the ore.

We had a railing around the ore pass, and he got inside the railing, between the car and the railing and over the open hole, and started jumping up and down on this crowbar. It came loose and came out; it fell down the raise and he went with it and was killed. Fortunately, somebody came along and saw what he was doing just as he fell, so we did know what happened. Otherwise we might not have known.

Marion Fair had a brother who was working for us as an engineer, in the engineering department at the mine. Of course, he was seriously affected by his brother's death. Don Delicate said he was causing him some troubles out at the mine, complaining about our mining methods and this and that. I said, in essence, "You've just got to go along with him for a while. He's undoubtedly got a lot of personal grief and really isn't in his good mind. The best thing to do is just ride it out for a while and see how things develop with him. See if he doesn't calm down."

Now, all this was going on during the Burroughs election campaign. One day I got a call from a reporter of the Albuquerque Journal. At that time they had a column on mining that ran occasionally. This fellow was the editor of the mining column. He called me and I found out that his brother had been killed in a coal mine accident; that is, the columnist's brother. He was very decent. He said, "I have a letter I'd like to read to you."

He read this letter to me over the phone. It was from Marion Fair's brother. It said that the Homestake-Sapin Partners was mining in a very dangerous fashion in Section 23 Mine and that one of these days it was all going to collapse and have a tremendous disaster. It was a letter to the editor and he said, "We were thinking of publishing this."

I said, "Well, I'd like to see the letter. Could you mail it

to me?" I was just stalling for time, really. So he agreed to mail it to me and let me give him an answer before they published it. He mailed me a copy of it. I got hold of Harry Bigbee again on this and asked him what we should do. He said, "The best person I know of to deal with the Albuquerque Journal is somebody with the phone company, Mountain Bell. We represent them. I'll get you in touch with them."

But I decided that wasn't really the way I wanted to go, so I kept talking to the reporter. After I got the letter I called him back. I made him an offer. I said, in essence, "I don't think this is justified at all. I don't think that there's any basis really. We have confidence in our mining methods. The mine inspector has seen what we're doing and has not objected in any way. If you want to show him that letter and have him come out and make a special trip through our mines, we'd be glad to have him. Then he can report back to you and tell you whether this is sound mining or not." That was a good deal. So he went on that. The mine inspector, Bill Hayes, gave a favorable report, so that ended it.

Chall: It's interesting that even though you were on this committee and had to defend the reasons for such accidents in the mines, that it was the other mines that were at fault, and yet they wanted to blame it on the AEC rather than their own methods. Were their own methods not good methods, do you think? Had the mine inspector passed on those?

Swent: It was probably a combination of many things. One thing was the use of inexperienced people, which we had opted not to do. Secondly, it was a result of trying to develop these ore bodies in the ore horizon without draining them. The ground was weaker and they had lots of ground-fall accidents in trying to develop them when the ground was still weak. And there was a lot of hurry.

The unions blamed a lot of it on the use of the contract system. There may have been some validity to that with the companies that weren't used to administering it. We had had years of administering of contract systems. One of the things that we always insisted on, is that these people do their jobs the way they're supposed to and don't take shortcuts. We were constantly on the alert for that, on the supervisory level.

The industry got hauled up before a legislative hearing on the same subject, and I testified at it. I was always put forward to testify because we had the best record. I testified for the New Mexico Mining Association at this legislative hearing. There was a labor leader named McCoy who was a representative and he was heading up this hearing. In the hearing people were blaming the

contract system--people were just out to make money and weren't paying any attention to their safety, and that this was a wrong system. Then McCoy asked me why we had such a good record with the contract system and nobody else did. It was an embarrassing question to answer. Bill Darmitzel, the executive director of the New Mexico Mining Association, intervened and said, "Mr. Swent is here to testify for the Mining Association, not for Homestake." So I didn't have to answer it.

Chall: Before you go on I'm going to ask you this question, since we're in the 1960 period. There was a report in the Grants Daily Beacon January 25, 1960. The New Mexico Young Republicans and the Oil, Chemical, and Atomic Workers Union criticized the mine inspector regarding safety in the uranium industry. That seemed like such an unusual combination. You answered it, of course. How did that come about? That was right after the election, wasn't it? Was Governor Borroughs re-elected?

Swent: No, Ed Mechem was--that opens up another political story. The head of the Young Republicans was a fellow named Dave Cargo, who had come out from Michigan and was a very energetic fellow, very ambitious politically, and a good organizer. But he was basically an opportunist. He just saw this as an issue that he could make some capital on. He was somewhat liberal in his other views, too. As a result of that, when the New Mexico Young Republicans convention was held in Albuquerque, a few months after that, there was quite a bit of opposition within the group to Cargo. They called up and wanted all kinds of Young Republicans to come to the convention. They just wanted as many people to come to this convention as possible, in an attempt to vote him out. So we organized a group in Grants to go in. We had never gone to this before, but we organized quite a few people and went.

Chall: You weren't a Young Republican? Was this a Republican convention?

Swent: No, it was a Young Republicans convention, but we were young enough to qualify. We went ahead and we did vote Dave Cargo out. But that didn't end his career. Dave went on and I'll have more to say about him later.

Chall: Okay. Well, I just was curious about what was going on. Didn't Governor Mechem also appoint you to a committee?

Swent: Ed Mechem was a very honorable fellow, very capable. He ran a good governorship. I think he was governor of New Mexico five different terms, the only person to ever hold that many terms.

He named me as one of two delegates from New Mexico to the Western Governors Mining Advisory Council. Now, the Western

governors--I think there are eleven or twelve western states involved--have formed their own little association. They meet yearly for two or three days, and they have a program at which they review different issues and hear presentations about these issues. Then they sort of make a decision as a group as to how they're going to face these issues.

The Western Governors Mining Advisory Council is a group that advises and makes a presentation at this annual western governors' meeting on the mining issues. We would meet maybe a month or six weeks before the governors' meeting in some city. We met in Denver, Salt Lake City, San Francisco, and various places. It's an organization that was started by Phil Bradley of California.[1] He was the main activator, main character. He would generally preside over the meetings.

Chall: These were mostly mining industry people?

Swent: Yes. There were two delegates from each state. The governor of each state named the mining representatives to go. So I was one of them. The other one--I forget who the person was, but I came from the uranium industry. There were three strong areas of mining in New Mexico at that time: the uranium industry, the potash industry around Carlsbad, and the copper industry down around Silver City, Hurley, and Santa Rita. That one grew with time. The potash industry sort of stayed level for quite a few years, then declined.

That was what Mechem did for us. He went around. He would always say at Republican meetings that Lee Swent was the only one who could get out a 90 percent turnout of the Republican vote in her precinct. This really wasn't true, and I think Ed was a good enough politician to probably realize it. But that's what it looked like on the surface. If you took the number of Republican votes that were cast and the Republican registration, we got 90 percent of it. But actually it represented a lot of Democrats who voted for Republicans.

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Dick Bokum of Sabre-Pinon wanted to make a contribution to Burroughs. He was a dabbler in New Mexico politics, and he had been associated with Victor Salazar, who was a very strong political character in the days before we arrived on the scene. Victor, under Governor Simms, had been the director of the Bureau of Revenue of the state and had been very powerful politically. But he no longer held any state positions, although he was still very close to the political scene.

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[1]Philip R. Bradley, Jr., A Mining Engineer in Alaska, Canada, the Western United States, Latin America, and Southeast Asia, Regional Oral History Office, University of California, Berkeley, 1988.

They decided they would back Burroughs. Bokum wanted the partnership to put up $5,000 to support Burroughs in his re-election. He went direct to San Francisco on this; he didn't come to me. He got a consent from San Francisco to do this. If they had asked me, I would have been against it. When he went to give the $5,000 to Burroughs, he wanted me to go along so that Burroughs would know who I was. He already did; I had met him. But Bokum just wanted the uranium industry to get the credit. So I went along with Bokum when he gave the $5,000 to Burroughs. It was kind of embarrassing, because I was working against him outside. But anyway, he was defeated and he never ran for public office any more.

As I mentioned before, we also elected Tom Bolack lieutenant governor, which was the first time in many, many years that a Republican governor had had a Republican lieutenant governor. This turned out in a way to be a big plus, because although he had only gotten in by two or three hundred votes, nevertheless, he wasn't unseated. Although the contest was lodged, the contest really wasn't pushed.

Replacing Senator Dennis Chavez

Swent: Late in 1962, Dennis Chavez died. His Senate seat was open and his term was to expire in 1964. Under the New Mexico law the governor was to name the successor to finish out the term. So a month before his term expired, Mechem resigned as governor. Tom Bolack as lieutenant governor then became governor. Then Tom Bolack appointed Mechem to fill out Dennis Chavez's term. So Ed Mechem had two years as a Senator. He ran for re-election as Senator and he lost that. Then he was appointed a federal district judge, which he still is, sitting in Albuquerque.

Ed Mechem also, in September of '62, made me his colonel aide-de-camp and gave me a big fancy scroll for that. Tom Bolack, in the month that he was governor, sent me an appointment as an admiral in the New Mexico Navy.

Chall: [Laughter] That was good!

Swent: Yes. Well actually this New Mexico Navy business was a result of some investments the state was making. The state had excess funds to invest at that time, so they finally invested them in two tankers. There was a lot of publicity on this, questioning why a land-bound state should be investing in ships. Apparently it was a

pretty fair investment. But anyway, the term "the New Mexico Navy" arose when the state purchased these two tankers.

Chall: Who followed Bolack as governor?

Swent: Jack Campbell, who was a Democrat. Mechem and Bolack had run again and they had been defeated. So all this stuff that took place in the last month, in December of '62, was after the election in November. Jack Campbell was governor for two terms. He got re-elected, so he was in for four years.

Municipal Elections and Other Political Matters

Swent: We continued personally in the Republican politics and municipal politics until we left in 1966. In the municipal politics, the first thing we got involved in was a campaign to try to defeat George Dannenbaum and get his crowd out. When this all began, George came over to the house and called on us. He was really calling on Lee as precinct chairman. He said, in essence, "Well, you've come to be quite a political power here now. I'm running for re-election as mayor and I'd like your support, and here's what we'd like to do." He made an offer there that was strictly political. I forget all the details of it, but he talked about what he would do for Lee and what authority she would have if he were re-elected. Lee said she thought it was pretty hard for him to live down the monument he had up on the hill, referring to the property that he'd sold to the city and on which Stella Dysart's swimming pool had been built, and which then later cracked and was useless. So she didn't make any deal with him.

We went ahead with the election and we were able to defeat him. We supported a fellow named Ted Howden, who was a Democrat and who was also supported by Angelo Sakelares, who was, at the time, our Republican county chairman. So Howden and Sak became quite a team. Actually, Sak--everybody called Sakelares, Sak--was the power behind the throne. It was a terrible administration. It was a real embarrassment. So at the end of two years Mayor Howden was defeated. I can't remember now who was elected in his place.

Sakelares was no longer county chairman. We had been without a county chairman for a little while. Sakelares got mad at being dropped and a number of other things. He got mad at the Republicans and finally changed his registration to Democrat.

Chall: Yes, there was an article in the paper at the time which I absolutely couldn't follow the reasoning of.

Swent: We were disenchanted with him and he was disenchanted with the Republicans. The next chairman was a fellow named Lee Francis, who was an old-time resident of the county and had been a rancher there. But he had been away for several years. He had formerly been county chairman before we came into the area, but we hadn't known him because he was away. Then he came back to live near Cubero.

It turned out--it was a strange little coincidence--well, I should go back to my days in Tayoltita. My brother had a problem with his hearing and as a result his speech was impaired. My folks hired a tutor for him two years in a row. They hired students, just out of college. The second year they did this the tutor was a fellow named Hugh Brown, who came out of Stanford and whom I met when I was down on vacation. At that time I was away at school at Moses Brown. But I did get to know him some. Then, of course, after the year of contract he left. Eventually--he would write letters--we heard he went to Santa Fe and got married and we sort of lost track of him during the Depression days. But it turns out that he had married one of Lee Francis's sisters!

So we became instant friends with Lee Francis. He was quite a character, basically trying to run things the way they had been run before, where the county chairman was it, the way Filo Sedillo ran it. He couldn't quite do it; we didn't let him do that. At first he didn't heed our advice very much. The municipal elections and the school board elections were theoretically non-partisan elections. When one of these first came up with Lee Francis he said, "Well, we can't get involved in that. That's a non-partisan election." I told him, in essence, "It's technically non-partisan, but literally they're not. Both the city and the school board work hand-in-hand with Filo Sedillo. They control jobs; they're all given to Democrats: the contracts, the insurance business, sand and gravel business that the school board controls--all of this goes to Democrats. And all the janitors and non-teaching people, non-credentialed people, are Democrats. There isn't a single Republican in the organization. And these all get out and work for the Democrats when there's a partisan election." Oh, he didn't think that was true.

Anyway, we went through a school board election. Lee Francis came around to me. He said, "You know, you were right. I went out on election day and all the Democratic precinct workers and everything were out there working, getting the school board vote out. You were absolutely right." So we got along better after that. He respected our political judgments.

We were opposed also to the policies of Manuel McBride, who in spite of the McBride name was really a Hispanic, a great, big, fat,

well-spoken superintendent of schools. But we were opposed to his teaching, or the way he ran the school district, as well as to the politics. He ran a terrible school system. He intimidated all the teachers and gave them no particular freedom. It was a very limited curriculum that he allowed to be put on.

So we were trying all the time we were there to get him ousted by means of getting the people that we supported onto the board. But we never succeeded. We never could get enough. It was a five-person board, and we could sometimes get two on it, but we never were able to get the swing vote.

The Valencia County Republican party treasurer was Floyd Lee, who was the husband of Frances Lee. This was a strange combination of names. Frances Lee and Lee Francis and Lee Swent. People got very confused over this, and we used to have lots of jokes over it at the conventions and things as they introduced each other. But anyway, Frances Lee was a national committeewoman from New Mexico and Floyd Lee was the Valencia County treasurer. They were very strong Republicans, very conservative, ranching background.

Eventually after two or three years I worked with Floyd raising funds. Then after several years I took his place as county treasurer. Then Lee and I got onto the state central committee. One of the people that the Lees were very interested in pushing, and they introduced him to us at one of the state conventions, was a fellow named Joe Skeen from Lincoln County, which is in the eastern part of the state, in the mountainous area where Billy the Kid held forth and was killed. He became elected state chairman of the Republican party and came to Grants a number of times to speak. So we got to know him pretty well.

The congressmen from the state were a fellow named Tom Morris, and the other one was Joe Montoya. There were two congressmen, and they ran at-large. The state had not been districted. The Democrats really resisted putting in congressional districts, and as a result they would always get Democrats elected, because they had a statewide majority. But there were areas of New Mexico that weren't, that were strongly Republican. After a few years federal law required them to district. As soon as they districted they lost one of those. A fellow named Manuel Lujan was elected from Albuquerque. Albuquerque was a strong point for Republicans. It was the outlying votes that usually overweighed Albuquerque.

Montoya I couldn't really talk with. But Tom Morris was approachable and I'd talked with him a number of times in Washington on some of our mining issues. He was always reasonable. Dick Bokum had supported him handsomely, and Dick was a good entree to him. Montoya was a silver-tongued orator in Spanish. He was

absolutely marvelous, just a pleasure to listen to, in a way, if you understood Spanish. And he spoke English very well. But he was just a real good orator in Spanish.

Chall: Why weren't you able to work with him?

Swent: He was just too far out. One election that he ran in, he got the people from the post office out to work for him, in violation of the Hatch Act. The Hatch Act applied to them. They came around with their hats pulled down over their eyes, hoping nobody would recognize them and that sort of thing. He was just not a reputable person. You couldn't trust him. But he was a great talker, and he had the full support of the Hispanic community. When Mechem ran as Senator, Montoya ran against him, and Montoya easily beat him. He held that position for two or three terms, until Harrison Schmidt defeated him, the ex-geologist and astronaut. That finished Joe Montoya. But that wasn't until the 1970s, long after we had left.

Chall: Did you enjoy your activities in the central committee and see a different side of the political spectrum, meet different people?

Swent: Well, we got acquainted with people from other counties and that sort of thing. But it really didn't change much in our way of thinking. In general, the Republican party was getting stronger in New Mexico. You couldn't see it too much in results, but you could see it in the organization and the way the votes were going, the increase in votes. But I think that's pretty much the end of the political story.

Chall: Well, let's see. I had a few questions. I was interested in what the United Grants ticket was in the municipal elections. Was that one of the tickets that you were supporting that didn't turn out to be what you thought it was?

Swent: I don't remember by title. I'd have to see the timing and who was on it. I would remember the names.

Chall: I just saw it in the newspaper articles on the election.

Swent: What year was it?

Chall: Oh, probably in the early sixties, I would guess.

Swent: If it was '62 or so, that was when Ted Howden ran, I think. That was probably Ted Howden's ticket.

Chall: I was curious about how the 1964 election went between [Lyndon] Johnson and [Barry] Goldwater in New Mexico.

Swent: Basically New Mexico is a conservative state. Even though a lot of the voters are Democratically registered, they're still conservative. Although Goldwater lost, he didn't do too badly. But it was a big disappointment. It was pretty obvious even before the election that he wasn't going to make it. There were a number of disaffected people. That's probably one of the reasons. Now Mechem was a conservative also. That was the year that he ran for re-election as senator and Montoya defeated him. So the whole thing was a bad year for us.

Chall: Well, it polarized the country.

Swent: Yes, it certainly did.

Chall: It even polarized the Republican party.

Swent: Yes. We knew Barry Goldwater, had met him personally a number of times and were personally admirers of Goldwater. But it didn't do the Republicans any good to have him nominated.

Chall: Yes. Was your Republican party pretty well split among the liberal Republicans, so-called, and the conservatives who backed Goldwater? Did you find that kind of split?

Swent: Yes, we ran into it at the state convention. But the Goldwater people at the state convention had the votes there. It was a serious division there, but they had enough votes to give him the New Mexico delegation.

Chall: What about the war in Vietnam, in terms of the community? I'm thinking mainly of Grants and the young people and their attitudes. You had a child in high school at that time.

Swent: Yes, but the war in Vietnam really didn't get going until Johnson's term.

Chall: Around '68.

Swent: This was a little before that. We moved out in '66. I think the escalation really began in '67.

Chall: Yes, that's right.

Swent: So we didn't think much about it in New Mexico.

Relationships with the Local Newspapers

Chall: Let me ask you about the relationships between the newspapers and the community. I noticed that in the papers that you gave me, the Grants Beacon primarily, they covered politics and they covered the uranium industry pretty thoroughly. It seemed to me that you were pictured in the newspapers for all the work that you were doing in the community as well as in the uranium industry. How did you get along with the powers-that-be in the newspaper?

Swent: Oh, we got along very well. There were two papers in town, of which the Grants Beacon was the dominant one. It was owned by Jim Barber. He came up early, I think, in the game: either late '57 or very early '58. Probably late '57. They purchased the Grants Beacon. It existed before then. It came out, I think, twice a week or something like this. It wasn't a daily paper at that time.

I think he had financial support from a fellow named Jack Sitton, who lived in Carlsbad and was a public relations man for the potash mining industry, and was also in the publishing business. I think Jack helped. We knew Jack through the Mining Association activities. He helped Jim; supported him while he got started. I think later Jim became independent. Jim was a good old newspaperman, and he was very immersed in New Mexico politics. He was a registered Democrat, but he had his eyes open, and was very conservative.

Shortly after he came to town and opened a shop, I went in one morning early to get acquainted with him and tell him something or other. We had a long, long talk and got along very well. From then on we got along very well together. We differed on the politics, but he respected us.

The other paper was--I forget, Uranium City Reporter, or something like this. It had been run by a fellow named Cy Rouse. But Cy was pretty old, verging on ninety. So he had his son, named Bud Rouse, running it. Bud was an alcoholic, unfortunately. He would get on the wagon and behave well for a few weeks or a few months, and then fall off and things would go bad. But I also made it a policy to know him and to try to get along with him. And we did. We liked Cy Rouse very much. Cy was an old Republican. He was the notary public who registered us to vote in the state. We liked Bud as long as he stayed sober. His paper came out two or three times a week. It was not a daily either.

Chall: I think the Beacon bought it out.

Swent: Eventually, I think, after a while, when Cy Rouse died. Then Bud just couldn't handle it anymore, and the Beacon probably bought them out.

Chall: Yes. They carried it on the masthead, at least through the years that I looked at your newspaper.

Swent: I see.

Chall: Then there was the Grants-Milan News, which was a weekly.

Swent: Yes, and I can't remember who published that, but that didn't last very long. Jim Barber eventually, after maybe six months or so, changed the Beacon to a daily paper, five days a week. They changed the name from Grants Beacon to the Grants Daily Beacon. We always got along very well with Jim Barber. Jim died a few years ago.

I used to play tennis with him. In fact, Jim was an excellent tennis player but a heavy smoker. He just used to be sort of an anomaly. We would play tennis Saturday and Sunday mornings, usually doubles, and after each set Jim had to have a rest to smoke a cigarette. You're out there for the exercise for your health and yet he was puffing away at the cigarette, counteracting the health activities.

Chall: I noticed in one of the pictures--I think it was one of the big parties where you gave safety awards--that 90 percent of the people looked as if they were smoking. I think you or somebody else was up at the podium already so it was after dinner. But it was the times.

Swent: Yes, it was the times. People smoked heavily.

Chall: All dressed up; it was very interesting.

Swent: Jim Barber died--I don't remember the year. It was into the seventies. He died of lung cancer. He knew; it was diagnosed and he knew it.

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It was kind of sad. He had already had the exploratory surgery and the doctors said there wasn't anything they could do. So they had sewn him back up, and he was recovering from that. He complained that he was just bored, sitting there waiting to die. So we suggested he ought to get a tape recorder and dictate some memoirs on New Mexico politics, because he knew a lot of politics and a lot of the inside events for decades back. We tried to get

him to do that, but he didn't have the strength and didn't do it. Marian Barber, his wife, thanked us very much for the effort and said the visit was very good for Jim. But he ultimately died there. Since then Marian Barber took on publishing the paper. She published it for several years. Just a year ago she finally sold it. It's now under a new ownership.

Civic Affairs

Cibola General Hospital and Related Activities

Chall: I wanted to ask you to discuss your many community activities, outside of politics. You were very active in the community. You've listed some. We've talked about your being trustee of Cibola General Hospital. By the way, where did the word Cibola come from?

Swent: I think that's the old Spanish word for buffalo. For the name of the hospital we had a statewide contest. I think two people suggested that.

Chall: That's right. I read that in your newspapers. I thought that if two people suggested the name it must have been important in the community. But the newspaper never went on to tell why.

Swent: This was on the edge of the old prairies. New Mexico is on the edge of the prairies where the buffalo had roamed. The word Cibola does appear in a lot of things in New Mexico. Coronado's expedition of 1640 was looking for the "Seven Cities of Cibola."

Chall: Then you were director of the Western Valencia County Health and Welfare Coordinating Council.

Swent: That was just a single-issue thing. That was to raise funds for the hospital. After that was done I dropped the activity.

Chall: Okay. Trustee from 1959 to 1966, and then treasurer from '63 to '66, of the Surgical Services Incorporated, which is the New Mexico Blue Shield organization.

Swent: Yes.

Chall: That was also more or less hospital-connected?

Swent: Well, that's where I got into it. I was approached to see if I would serve. Their headquarters were in Albuquerque and all the meetings are in Albuquerque. I had to go there.

Chall: What were your concerns?

Swent: The concerns were mostly rate-setting and rate structures and getting support of the doctors for whatever the board decided to do. Because if the doctors in their practice didn't support it, why, it didn't work. There were doctors on the board, but they wanted me on there as public representation so that the doctors wouldn't dominate it. There were a couple of others; I forget who they were now. It was never intense. All discussions were pretty much on a gentlemanly level. Basically the doctors that were on the board were very cooperative.

Chall: Did the Blue Shield have an effect in the community in New Mexico?

Swent: It did pretty well. When the early federal insurance programs for federal employees came out, Blue Shield and Blue Cross were selected to do the claims work. Blue Shield and Blue Cross work very closely together in New Mexico. We had a joint operating committee. We had a separate board of trustees for each, but there was a joint operating committee between the two. We had one guy who was the administrative head of the two. He was very capable. By combining the two we were able to get into the computer business pretty early. It was having that computer capability that gave them the inside track to get the administration of federal claims when it came about. I resigned, of course, when we left.

New Mexico Joint Council for Economic Education

Chall: Now, as trustee of the New Mexico Joint Council for Economic Education--what does that group do?

Swent: That was a group that was trying to push economic education of the free enterprise system. There are lots of these groups around. They gave lectures and had activities, had contests and things to just try to educate people who didn't know what the free enterprise system was about and how it worked.

Chall: This was in the schools then?

Swent: Most of it was at that level, yes. But some of the projects were even outside the schools, for the general public.

Chall: What kind of projects, for example?

Swent: They only met about once a year. I don't remember too much. We did address the drop-out question. But I forget what the specific

Swent Heads Hospital Group

L. W. Swent, a Homestake official, was elected chairman of the board of the West Valencia Health and Welfare Coordinating Committee Monday night as the board voted to redouble its efforts to raise funds for the Cibola General Hospital.

Swent takes the place of Boe Cook, who had agreed to serve on a temporary basis. The committee has jurisdiction over the hospital fund raising.

Next week will be designated "Hospital Week" in Western Valencia County in a renewed effort to raise funds to match federal Hill - Burton money for hospital construction. Among money-raising projects will be house-to-house solicitation, sidewalk painting, chuck wagon suppers at Bluewater, a benefit movie and many others.

Mrs. L. T. Courtney, Albuquerque, was given a prize for winning a contest held to select a name for the new hospital.

activities were. This was not an activity that took much of my time. I don't have much specific recollection of it.

Chall: I can understand what you might have been doing as trustee and secretary for the First Methodist Church of Grants, obviously. I think Lee was also active in the church.

Swent: Yes, she taught Sunday school there.

Chall: And director from '60 to '66 of the First National Bank of Grants.

Swent: Yes. When we first went into Grants, the only bank there was the Grants State Bank, which was headed up by Ralph Card, one of the carrot growers and real estate owners in Grants. He was an old-timer there. After two or three years the Oklahoma group and Senator Clinton Anderson wanted to establish a bank. They came in. Through Clinton Anderson's connections they managed to get a national bank rather than a state bank. They set up shop in town and sold stock locally. I bought some shares in it. After two or three years of operation they asked me to be on their board. So I joined, I forget what year now. And I stayed on that until I left in '66.

Chall: You were a busy person in the community, and on the job.

Swent: Yes.

Chall: You must have had a lot of energy!

Educating the Swent Children

Chall: You spoke a while ago about the superintendent of public schools with some disdain about his school system or the way he ran the school system. You had then, what, four children in school, three well along in school and maybe one or two in high school? How did you feel about their education, the kind of education they were getting, considering that you had had a top-notch education?

Swent: I guess the best way to express that is by what we did. We let them go through the elementary schools, but both Kim and Christine, when they came to high school level, we sent away to private schools.

Chall: Oh, I see. Where did you send them?

Swent: Kim we started off at the Orme School in Arizona, where he had gone to summer camp. It's a ranch school. He loved the horseback riding and all this. While there he fell off the horse once, riding bareback, and chipped an elbow and had to have a cast on for several weeks. But that's fully recovered. So he was there for, oh, a year or two.

He liked to play the piano. We had given him lessons with a Mrs. Croteau, who was the wife of a fascinating old fellow, Mike Croteau. He ran a trading post there and had been in the area for many, many years and was intimately acquainted with all the Indian tribes and had access to lots of good Indian materials. Kim took piano lessons from Mrs. Croteau, and later from a lady named Viola Pena, the wife of a strong Republican named Abe Pena.

When he got to Orme he didn't have a piano. They didn't have a piano there at this ranch. Well, they did. They had one in the chapel. At first they wouldn't let him play in the chapel. He finally prevailed on the headmaster to be allowed to play the piano in the chapel when the chapel wasn't in session. He did this for a while. They pushed him to go out for football. At first he was quite interested in this. Then he saw somebody get stepped on, whose fingers were badly damaged and he said, no, he didn't want to get into that. That would ruin his piano playing. So he lost his interest in football. I think this caused some sort of disaffection with the headmaster. The headmaster said, "Oh, you need contact sports," and Kim didn't want to have any part of it.

He started playing the piano in the chapel. I don't know all the details, but one of the problems was that he was playing jazz music in there. They objected to this and said he should limit it to the classics, classical music. This just became too much of a burden on him. He got in crossways with the school authorities. Finally we decided we'd better change him. He was having such a terrible time.

Chall: And he was pretty young.

Swent: Yes, but he also knew what he wanted. While there, he took the first year of Latin and he loved it. He liked Latin so well he wanted to get credit for the second year, but he didn't want to have to take the second year. So he studied it on the outside, took the exam, passed it, and got the credit for his two years of Latin.

When the crunch came and we figured we had to change him, I happened to be in the East. I visited the school I had gone to, Moses Brown School, and checked to see if we could get him in in the middle of the year. They accepted him for the term beginning

in January of that year. He went back there and spent two-and-a-half years and then graduated. He was somewhat happier there.

Chall: Where did he go then to college?

Swent: He was accepted at Haverford College, which is a Quaker college. Moses Brown School was a Quaker school. But then he got kind of cold feet and decided to stay out a year, which was all right. He graduated from prep school very young and wasn't really prepared for college. So he stayed out a year, which is what I did, too. Then he went back to Haverford. That was a complete disaster. But that's all another long story.

Chall: Did he finish college someplace?

Swent: Eventually. It took years, but this was in--

Chall: In the seventies?

Swent: Well no, it was earlier than that. This was in the Vietnam War days and in the days of the student uprisings and the statements of, "This is my education and I'll learn what I want to. I don't have to repeat all this stuff back to you." What happened at Haverford was that he wouldn't take his finals at the end of the first year. So they gave him provisional failures. Then they told him they would permit him to take another set of exams that they would offer in the fall. If he passed them, then he could come back.

At first he refused to take them and then at the last minute he decided he would take them. But by the time he had changed his mind it was too late to get the exams. So they gave him failures on all of them and he was not allowed to return.

Chall: Did he continue with his piano, though, the music, while he was there at Moses Brown?

Swent: Yes. It went on into guitar playing. That's what became popular. He went into guitar and singing. He wouldn't take any voice training. We offered to give him voice training and he wouldn't take that. He said, "Oh, you can just tell all the people who've had voice training. We want a natural style." And it didn't work out.

Chall: What about Christine? Where did she go?

Swent: Well, Kim was already at Moses Brown. There's an allied Quaker school just about six blocks away in Providence called the Lincoln School, which is a girls' Quaker school. We were looking around

for schools and we hired a school consultant who conferred with us in Albuquerque. She named a number of prep schools. I went out and visited some of them. I went by Providence to visit Kim and while I was there I talked with the headmaster. He said, "Well, I suggest you go down to Lincoln and look it over." So I did and I was so much impressed by the living quarters. So much better than they had in the other schools, much better atmosphere.

We had already tentatively thought that she would go to a school in Pennsylvania. But I didn't like the looks of it. The campus was fine but the living quarters and the conditions that they permitted were not--and this was again, the days of all this freedom--weren't very good. So I told Lee and Tina when they went back--they went back on a trip to visit them all--to be sure and go to Lincoln. When they did they thought that was, by far, the best. So Tina went to this Lincoln School and graduated from there. She stayed the full term.

In the meantime we moved out here [Piedmont, California]. She had been there two years when we moved here but we decided to leave her there. I'm not sure whether that was a good idea or not. Maybe we should have brought her out here and put her in Piedmont High School or into Head School here.

Chall: That's right. There are good schools here. So when you did move here you at least knew that the last two children were going to get a good education.

Swent: Actually, Richard refused to go to Piedmont High. He went through the junior high, started in the junior high, and didn't get along at all. The Piedmont people, in the schools at least, are very hard to get along with. They're hard on outsiders, and when he came in he was an outsider. They gave him a rough time. I remember once a couple of kids got him down and tried to squeeze his kneecap off and things of this nature.

Chall: My goodness, how terrible!

Swent: He had been in the honor society in New Mexico and they wouldn't recognize it up here. Things of that sort. When he got through with it all he said, "I don't want to go to Piedmont High School." So we sent him on back to Moses Brown.

Chall: Well, that has been a good place! [Laughter]

Swent: Yes! [Laughter]

Chall: Did he get along all right in Moses Brown?

Swent: Oh yes. He did pretty well there. He got good grades and was accepted at a number of colleges. He finally decided to go to Occidental College down in, what is it? Eagle Rock, California, in the Los Angeles-Pasadena area. He went there and graduated from there in physics. He majored in physics.

Chall: And Jeannette, did she go all the way through the Piedmont school system?

Swent: Yes, she went through high school and graduated from the high school, got lots of honors. Graduated in 1974 and then went to Wellesley College in Massachusetts.

Chall: She's the pianist.

Swent: Yes, and violin. She played the piano and violin, although she's staying mostly with the piano now.

Chall: How did your colleagues in Homestake and your neighbors feel about your sending your children off to school? Did they consider that to be a sort of aloof position?

Swent: No, I don't think we ever got much criticism for that. Most of them agreed that the Grants High School wasn't very good.

Chall: All right. Do you have another subject to go on to?

Part D The Maturing of the Homestake-Uranium Venture

Administration of the Partnerships

Swent: I thought I'd go back to the uranium business now, from the politics.

Chall: Okay.

Swent: John Hamilton had hired George Snyder, even before I showed up in Grants in 1957, to be the New Mexico office manager. John told me all about George and why he'd hired him, and that was fine with me. George, I came to like. He was a good office manager. But somewhere along the line, after we got through the lawsuit and everything, John turned against him.

One of the problems I had in the early days was, I would ask George for this or ask George to do that. Then a few days later I would say, "Where is this?" "Well, I haven't had time to work on it." "Why don't you have time to work on it?" "Well, I'm doing this." "Why are you doing that? I haven't asked you to do that." "John Hamilton asked me to do it."

Finally this got very bad. I kept telling Ab about it. Of course, Ab had this feud on with Hamilton. They didn't speak to each other, so they couldn't resolve it. Ab finally took it to Don McLaughlin to resolve. Don McLaughlin came out with a memorandum saying that the chief accounting person at each property would be agreed upon between the manager and the treasurer, that neither one could hire someone to fill that position without the agreement of the other, and that he essentially was working for the manager--which was much more helpful. From then on they made all their projections in San Francisco. They had just been taking a lot of George's time away from me for corporate work, really, things that should have been done in San Francisco. That problem was resolved.

Then John Hamilton turned against George Snyder. He wanted me to fire him, and I wouldn't agree. He wanted to fire him because, he said, "He represented himself to be an accountant and he's not." George wasn't an accountant; he was an office manager, well versed in all types of clerical and stenographic work. He didn't pretend to be an accountant. I knew that he had not represented himself to be an accountant, because John had gone through his background with me. George never represented himself to be an accountant. So I couldn't agree with that as a reason for firing him.

But I got a lot of pressure. John said they wanted to put in a real accountant there. So I went through quite a bit of searching to try to find somebody that might become a chief accountant, that was acquainted with mining. I found one that I thought would work out all right and George could work under him, if this would satisfy Hamilton. But then Hamilton didn't like this fellow. He was an elderly fellow that had worked for AS&R Company (formerly American Smelting & Refining Co.) down in El Paso and was retiring from there--early retirement--and still had a few good years in him. He knew the business, at least knew mining accounting, and clerical work.

So the next one that I tried to get was a fellow named Charles Rohrer over in Tucson. I went over there to interview him and was very favorably impressed with him. But then it turned out after thinking about it, he didn't want the job. He figured he was moving sideways and he wanted to move upward. So he wasn't interested. By the time we went through all of this, John Hamilton had simmered down somewhat and it didn't become necessary to follow

it up. We got along with George and George stayed there until he retired.

Chall: That was a lot of time wasted.

Swent: Yes, and I never had my heart in that. I thought that George ran an excellent office. I've worked in several mining camps and have seen a number of mine offices, and I've never seen one run better. I always said that what the San Francisco office needed was George Snyder! [Chuckles] Particularly after I got up there. I would have given my left arm to have had George Snyder up here after a while.

We had initial problems with the Homestake-Sapin Partners mill. The first problem was in the sampling plant. We found that there were things that had to be corrected in the sampling plant because the sampling results weren't correct. You could run a lot through and sample it and then run it through again and get different results. Gene Allen worked with Utah Construction Company to get these worked out. After two or three months they got this all corrected so that it was working fine.

Special Problems of Ore Recovery ##

Swent: There were other more serious problems, one of which basically was the recovery. The recovery from the mill was just not as good as had been anticipated. One reason, we found out, was the Calumet and Hecla ore, which we had agreed to buy, was not as amenable to our process as other ores in the area. One thing we learned over the years was that the ores in the western end of the Ambrosia Lake district, that were in the Westwater Canyon sandstone, got progressively less amenable to our process as you went east in the district. When you got way out to the eastern end it was somewhat less amenable. But then there is a little sandstone layer above the Westwater Canyon sandstone called the Brushy Basin. It's not a very significant sandstone member, but it had a few small ore bodies in it, and the Calumet and Hecla was one. All of these Brushy Basin ore bodies were very poor in our mill. So one of the problems was the Calumet and Hecla ore.

But there were still other problems, particularly in the precipitation area. The mill needed some major improvements. Gene Allen, who was the mill superintendent and had been involved in the design, didn't seem to be able to do this. He wanted to just make a little adjustment there and a little adjustment here. It became apparent that one of his problems was probably mental. Since it

was his design, he didn't want to change it. That might have been one thing. The other was that probably he was afraid to face the cost of it. He couldn't get it cured.

Ab Shoemaker and I finally had a big talk about this. We decided that we'd have to let Gene go. We decided to bring Frank Howell down from Lead. He had worked under my father-in-law, along with a fellow named Claude Schmidt. But when my father-in-law retired, he said this was one of the toughest decisions he ever had to make. He chose Schmidt to be the chief metallurgist and then Frank to be the second. Frank wasn't sitting too well, so we thought this would be an opportunity for him, to come down to Grants and head up the mill there.

It fell to me to actually break the news to Gene. I did this one day, told him as politely as I could that we were letting him go. He became absolutely furious. Finally when he was walking out of the room he said, "You'll hear from Dick Bokum about this." This had been one of the reasons we had been a little reluctant to take action earlier: he was a Sabre-Pinon person and we thought that it would reverberate.

I heard from Dick Bokum, but it was a surprising conversation. He called and was very--normally Dick can be very aggressive and he talks very loudly, overwhelming sometimes. He has a very infectious laugh. But he called and said very quietly, "What's the problem with Gene Allen?" So I told him. He said, in essence, "Well, I think you're right. The only thing I could say is you should have done it sooner. But we've got a problem with Gene. He owns a number of stock options in Sabre-Pinon. When you let him go now, the time to exercise them has arrived. He doesn't have enough money to exercise them. So we've got to find a way out of that." What we finally wound up doing was lending Gene enough money to exercise his stock options. Then he paid it back over a year's schedule or something. This worked out fine.

When terminating an employee we usually gave them three months' salary, but Gene needed more money than that to buy his stock options.

Frank Howell came down within a day or so. And we also brought down Harold Sliper, who was a civil engineer in Lead. Frank asked for him. He said, "Well, with all the changes we've got to make, I need a design engineer." We decided not to continue the thing with the Utah Construction; they were just too expensive. Frank came up with a modification program. It was around a million dollars of modifications. Mostly the money was in the precipitation area, where the yellowcake was precipitated. That was not working well at all. We had to put in new tanks,

additional tanks that is. There wasn't room inside the building so we had to put them outside. If they were going to be outside they had to be insulated.

Chall: You really had just finished building it not too long before.

Swent: Yes. Just a year, maybe less than a year before.

Chall: It didn't take you long to find out, did it?

Swent: Frank got it running pretty well in about a year's time. The recovery improved to where it was supposed to be. He fine-tuned a lot of things. In the meantime under Frank I think we also put in the roaster--and this was not part of the million dollars; this was a separate project--for the Blackjack Mine ores that I had mentioned before.

Administrative Aftermath of the Lawsuit and Split in Partnership Management

Swent: The last thing that we did under Frank was--well, I've got to go back a little ways here and now talk about the aftermath of the judgment in the lawsuit. In general, the judgment left matters in a rather unsatisfactory condition, for Homestake anyway. The split management was a problem. Generally Clyde Osborne and I cooperated in trying to have similar labor policies, personnel policies, wages and salaries and that sort of thing. But occasionally Clyde liked to show his independence. He would do something that I would consider was out of line and that we couldn't go along with. We had many more employees than he had. It was kind of a thorn in my side.

Homestake and the limited partners were constantly bickering and Clyde tried to be a go-between for them. Homestake didn't dare fire Clyde as a result of the judgment, because the case was still subject to going back to the judge if the judgment wasn't satisfied. So they didn't feel like firing him. It was unsatisfactory for them; they couldn't give him any orders. So Ab was unhappy with that.

Chall: And he was still managing both sides?

Swent: Yes, Ab was technically in charge of both parts. Finally one of the things that became apparent to everyone was that it was going to be almost impossible for Homestake-New Mexico Partners to get their AEC contract renewed after it expired on March 31, 1962. The

AEC had announced the general policy of extending mill contracts through December 31, 1966. But they were subject to having the ore reserves in hand.

Homestake-New Mexico Partners didn't have the ore reserves. Section 32 had turned out to be a big disappointment. It didn't have the quantity of uranium that had originally been estimated. Rio de Oro, in their objecting to the partnership agreement and dedication of the ore, had sold off their excess ore, so they no longer had it. It looked like they weren't going to get an extension.

Chall: Goodness, after all the money that went into that development! That really hurts.

Swent: Finally Dick Bokum got messing around in this picture. What he finally did was to buy out the limited partners in Homestake-New Mexico Partners. Then we had Sabre-Pinon as a limited partner in both partnerships. That made life a lot simpler.

The next thing we had to do was to get the AEC contract for the Homestake-Sapin Partners mill extended to 1966. Now you didn't get these extensions casually. In the first place, you had to take a cut in price. AEC by then was flooded in uranium, and they were trying to cut back. They were reducing their prices. You usually had to negotiate. They were pretty fair and carried out their policies correctly. In fact, as far as I could see they were a good government agency, at least the raw materials end of it. They had knowledgeable people.

So we negotiated quite a bit. I had to make quite a few trips up to Grand Junction. What finally came up was a contract combining the two mills into one contract, since there were the same owners now. Then we had to negotiate a new partnership agreement between Homestake and Sabre-Pinon. Because the old partners' agreement just wouldn't cover the additional properties. Homestake had to combine the assets of the limited partners of Homestake-New Mexico Partners (which Sabre-Pinon had just bought) with those of Homestake-Sapin Partners. Homestake also conveyed its interest in Homestake-New Mexico Partners to Homestake-Sapin Partners.

The big thing was how to evaluate the interest that Bokum had bought, and what it would produce in the future. So they asked me to run a projection on this. The two partnerships at that time were 25 percent Homestake and 75 percent Sabre-Pinon. They said, "Now you run a projection on the Homestake-New Mexico Partners mill as to what it can do, how much it will produce, and what profits it would have, if it just ran as a separate mill under the old

partnership agreement." Bokum was subject to that. He had bought into it and he was subject to the Homestake-New Mexico partnership agreement, which provided that Homestake had put 150 tons a day of ore into the mill. So I reasoned that Homestake could put 150 tons a day of partnership ore, that is Homestake-Sapin Partners ore, into the New Mexico Partners mill and earn its profit on that. Nobody had thought of this. When we ran the projection based on that, it turned out that Homestake got a lot more than 25 percent out of that partnership.

So this led to some very tough negotiating between Sabre-Pinon and Homestake up in San Francisco. I wasn't involved in those negotiations, but Dick Stoehr was and he told me about some of them. By then John Gustafson had come in and was president of Homestake and was conducting these negotiations. John had some serious stomach problems, and eventually wound up having some very serious surgery. The last day or so of negotiations with Sabre-Pinon, Dick Stoehr told me that John was in just terrible pain and really shouldn't have been negotiating.

Swent Again Manages All Mills and Mines

Swent: They came up with a new partnership agreement. It had a few things in it that I didn't like, and Dick didn't like either, but we were stuck with them. The good part about it was that they decided the new partnership would be 35-65 instead of 25-75 as a result of the projections on the potentials for New Mexico Partners. The other was that at the end of 1966 they would convert the partnership into a corporation. The corporation would revert to the 25-75 related ownership in stock. The reason that they negotiated this was that John Gustafson was afraid that by 1966 there still would not be a commercial market. He didn't want Homestake to be saddled with the expenses of maintaining a corporation and an operation on a losing basis until a commercial market came along. This would shift the onus to Sabre-Pinon. They were quite willing--Sabre-Pinon was very gung-ho on uranium so they were quite willing to do this.

So with that partnership agreement we finally got the new AEC contract. All the properties from Homestake-New Mexico Partners were dedicated to the Sapin partnership. The big closing date, when all of this became effective, was November 1, 1961.

Chall: Does that mean that you were now once again managing the mills and all the mines, as you had been before the trial?

Swent: Yes, right. They bought Clyde Osborne out. Clyde retired and went to live in Arizona. I saw him many times after that, but he was no longer involved.

By then we had retained a metallurgical consultant named Al Ross. Frank Howell had objected to this. Ross was a consultant for Kerr-McGee and also for Phillips and knew the area very well. He was from Toronto. He had a metallurgical consulting firm up there; he came very well recommended. He had come to me two or three times and wanted to see if we would retain him. I finally reasoned that I had had enough experience with partnership matters then, and that it probably was wise to have somebody like Al who was independent, who could advise us, and who could serve as a buffer then against any criticisms from our partner. So I wanted to take him on.

I told Frank this and Frank said, in essence, "Oh, well, he's not going to do any good. He'd just walk around and talk to us and pick our brains and then suggest our ideas back to you." I said, in essence, "Okay, Frank. We'll see. You write down everything that you can think of that we ought to do in this mill. We'll hire him and I'll have that list. Any of these things that he suggests that you've already got on your list, you'll get credit for."

Chall: You were a wily manager.

Swent: We settled it that way. It turned out that Frank named a few things and I got the list. But Al Ross in the long run came up with a lot more ideas than Frank had listed.

Integrating the Operations in the Mills

Swent: The first thing that we wanted to do, after the consolidation of the partnerships on paper, was to consolidate the mills physically. This involved quite a bit of change. New pipelines. We couldn't move any of the equipment, but at least we wanted to integrate the circuits. For instance, we had two crushing plants, we had two grinding circuits. We did move one ball mill from the New Mexico Partners mill up to the Sapin mill. But I think that was about all we moved. We had planned to shut down the New Mexico Partners crushing plant and grinding plant and then with pipelines we would connect the leaching circuits. We would discontinue using the precipitation circuit in the New Mexico Partners mill and use just the one in the Sapin mill, which was now superior to the precipitation system at New Mexico Partners as a result of the improvements that Frank had made.

This was a fairly expensive operation. It took $400,000-$500,000. So we wrote up the project and I submitted it to Ab. Ab took a dim view of it. He said, in essence, "Gee, the thing's working good now. Everything's working well." I said, in essence, "Well, it would be a lot cheaper if we do this. We'll save a lot of money." He was reluctant, but he finally proposed it. He said, "Boy, it had better work or your name's mud!" He was dubious about fiddling with it.

It took several months. In May of '62, I think, we finally made the conversion and started the new operation. We had to lay a lot of people off at Homestake-New Mexico Partners, and they knew it was coming. So we devised a plan whereby we were going to give three months' severance pay to everybody that we laid off. But they had to stay until we completed the conversion and didn't need them. If they got a job somewhere else and quit beforehand, why, they were on their own and they gave up the three months' severance pay. That worked pretty well. We kept as many as we needed anyway, up until the last day, and then we began laying them off. It wasn't an overnight layoff. It took two or three weeks to accomplish. We needed some of the people while we broke in operators on the combined operation. But it was very successful and saved a lot of money. The cost came down very noticeably.

Chall: I guess it's really difficult for major corporations to consider long-run cost benefits against what looks like a short-run payout of a lot of money. You have to be able to defend these things pretty well, I suppose.

Swent: Yes. Homestake's criterion basically on any project is, you have to get your money back in three years.

Chall: I see. Oh, this was pretty good then.

Swent: I think we got it back in less than that.

Chall: Hadn't you already disassembled two of your mills? When the first case came down, I think you talked about the water and electricity and things of this kind.

Swent: Well, they weren't really cut apart. We just had to see that--on the electricity we had to add another generator on the Sapin side to be sure that the generation was evenly distributed in accordance with the requirements of each partnership.

Chall: Now you were integrating again.

Swent: Now we integrated them. We didn't need that engine there. [Laughter]

Chall: Yes. [Laughter] They must have been going crazy up there in San Francisco!

Swent: Well, we left it there as a spare, but it wasn't really needed. That gave us two spares we could operate with.

Chall: When the general partner like Homestake has 35 percent and the other limited has 65 percent, isn't there some danger of a lot of difficulties in getting along with the partners that own more of the stock? I don't understand this completely, but it looked as if the 35 percent could be wagging the tail of the 65 percent.

Swent: Well, the theory of a limited partnership under law is that the limited partner doesn't have any liabilities.

Chall: I see.

Swent: He has no voice in management and he has protection from liabilities, other than the assets of the partnership itself. But if the assets of the partnership itself aren't enough to cover the liabilities, the only one that's responsible then is the general partner. Creditors can go against a general partner but not the limited partner. So that makes them keep their hands out of operations to a certain extent so that they don't jeopardize that status. Because the court can always say, "Well, that's not being run as a limited partnership. Actually the limited partner was participating in management and therefore he's a general partner and is liable." So there's quite an incentive to not overdo it in trying to dictate management. They do a certain extent of it. There's always some pressure.

Chall: You did have some problems on that though?

Swent: Oh yes. But in the final analysis the liability protection is worth a lot to the limited partner.

Chall: I see. I just had to get that clear in my mind. It looked a little rocky to me.

Swent: Yes. Well, it's not a favorable position to be in, but under the partnership agreement that we had--both of them, both the Homestake-New Mexico Partners and the Sabre-Pinon one--Homestake was entitled to recover money. We didn't just divide everything up 25-75 right from the beginning. Initially Homestake was entitled to all the cash flow until they recovered their investment. We had a combined investment in the two partnerships of about $25 million, of which $9 million were borrowed from the Chase Manhattan Bank under a loan agreement. That loan agreement, I think, was--well, both partnership agreements were involved. But the only cash that

went out to the limited partners was an annual amount--I think to Sabre-Pinon it was $100,000--to enable them to pay their income taxes. Because if it was a profitable venture they had to pay taxes even though they got no cash out of it.

One of the things that made Ab furious--and it made me furious, too, in the long run--but in just one year, I'm not sure whether it was '61 or '60, Sabre-Pinon was due its $100,000. We usually paid it at the beginning of the new fiscal year. We were on a March 31 fiscal year at that time. You know, taxes are normally due in mid-April, so we usually paid it sometime in early April, after the past year had closed. Dick Bokum called John Hamilton up in San Francisco one day and said, "Gee, we'd like to have our $100,000 advance here this week instead of next week," or something. John said, "Oh, sure, sure, fine," and wrote the check and sent it off. By golly, he didn't even check the books or anything to see where we stood.

This brought our working capital down below that which was required under the bank loan agreement. The critical thing in the bank loan agreement was what our working capital was at the end of the fiscal year. By giving that $100,000 out on March 25 or whatever it was, John had brought us below the required working capital on March 31. Later Dick Bokum said, "Oh gee, if I had known that, we could have gone another few days without it. I'm sorry." But Hamilton had authorized it. Ab was just furious over that. It caused all kinds of problems with the bank. They came in and went over the operation with a fine-toothed comb to see if it was sound and all sorts of things. It took a lot of my time. Until a year later when again, at that time, we were all right, we were just under real close scrutiny from the bank.

I'll start on another little problem that we had. This goes back in the early days of operation. One of the things we had to do was to haul our ore.

Hauling Ore from Mines to the Mills

[Date of Interview: January 29, 1988] ##

Negotiating Haulage Contracts

Swent: We were just starting on trucking, I think.

Chall: That's right. Hauling ore from the mines is what I have in my notes, so that's where we'll start.

Swent: Well, there was a need to haul the ore. The mines were an average sixteen miles away from the mill. Section 23, the central mine, was sixteen, and the other two were a mile greater and a mile less, respectively. When we first got started we didn't have very much volume of ore to move. We contracted with a fellow who came in and asked for the business. He called his business Rocky Mountain Transport, I think. His name was Red Waldie.

But we anticipated that the business would build up, that we would be shipping more and more ore, up to 50,000 tons a month. The prices we were paying at first were, we figured, too high. They were about six cents per ton mile. We brought down a fellow who did our haulage in Utah, and who we had a lot of confidence in, and had him assess the roads and the conditions and everything, and then estimate what would be a reasonable cost for us to pay. Then we put out a call for bids. There were a number of competing trucking companies. We asked them to submit bids and said that their bids would be kept confidential.

Now, the trucking rates were controlled by the Public Utilities Commission. The trucking was a regulated industry, unless you were hauling for yourself.

Chall: This was intra-state though.

Swent: Yes, this was within the state.

Chall: So there was a trucking regulation in New Mexico?

Swent: It was done by the New Mexico Public Utilities Commission.

Chall: I see.

Swent: So we put in a provision that the successful bidder would have to have these rates approved. Whatever rates he bid would have to be approved by the Public Utilities Commission. So we got the bids in, and Rocky Mountain turned out to be the successful bidder. He had several stages, but it would get down to four-and-a-half cents per ton mile when our volume built up. He would be starting out at five-and-a-half and then reducing to five and then to four-and-a-half as the tonnage built up. Under the Public Utilities Commission acts or regulations, anybody can file a new rate at any time they want. It's always open for inspection, but it's subject to question for thirty days. If it's not questioned in thirty days, then it can go into effect. If it's questioned, then they

hold a hearing about it, and the commission decides whether the new rate can be used.

Well, he filed for the five-and-a-half cent rate and immediately invoked a hearing, because everybody and his brother wanted the business. So they all called for a hearing. This was a great big event. We had the big hearing in Grants on it. I had to testify and tell about having called for bids. They wanted to know what the results of the bids were. I refused to tell them, because I said that we had told people that their bids would be confidential. They said, well, that didn't make any difference. It was part of their business and I would have to tell them.

Anyway, we argued a little bit. Finally they adjourned the session and said they'd meet in another few days to take it up. In the meantime I went to Harry Bigbee to get his advice on it. He said, yes, they were right, that I had to tell what these other bids were. There was no question about that. When the session reopened things weren't quite as confrontational as they had been when they adjourned. But they said, "Well, are you prepared to answer the question? You've had legal advice now." I said, "Yes." So they asked the question in such a way that actually I didn't have to give out the individual numbers. All I had to do was tell who was high bidder, second bidder, second, third, and fourth. So I was greatly relieved at not having to give out the actual figures that each had bid.

As a result of the hearing, Rocky Mountain's five-and-a-half cent rate was approved.

Chall: Did they think it was too low?

Swent: Well, yes, they [PUC] wanted to see whether Rocky Mountain could do it and make money at it. Everybody had to submit costs and depreciation rates and labor rates and the whole thing.

Chall: Why would the Public Utilities Commission get into this?

Swent: Well, to keep it from becoming too much of a cutthroat business. There were a lot of people who would buy trucks and charge any old thing. They didn't really know how to do business.

Chall: They wanted to prove that it was a legitimate bid?

Swent: Yes.

So he started hauling our ores at the five-and-a-half cent rate, and also our custom ores. We had a provision in our custom ore contracts that allowed us to direct the haulage of the custom

ores to tell the custom ore shipper whom to use. We didn't really want to go into the haulage business ourselves because it required too much of a capital investment. We had spent all of the bank loans that we'd gotten and then the Homestake loan. This would have required another million or million-and-a-half dollars, so we preferred to just pay for it in operating costs. So Red went into an increased fleet and purchased additional trucks, all of them on time contracts. He didn't have the capital to purchase them outright.

Then, at this time, Dick Bokum decided that Sabre-Pinon wanted to do the haulage. They bought up a little trucking outfit that had some schedules on file, and changed the name of it to Sabre-Pinon. By then the partnership was profitable and he had enough cash flow that he could borrow the money from the Chase Manhattan Bank to do this. I didn't know what his objectives were here. He went directly to Don McLaughlin in San Francisco, and offered to haul all the ore at whatever it was then costing the partnership. McLaughlin agreed with this and okayed it and didn't even tell me.

In the meantime Rocky Mountain volume got up to where they filed their five-cent rate. That had to sit there thirty days. They also filed the four-and-a-half cent rate at the same time, to be effective a month later, because by then we expected to be up to enough volume to justify it. There were no objections to these, so we started paying the five-cent rate.

Then on the morning that the four-and-a-half cent rate was to go into effect--we hadn't paid on anything yet; it was just the day that it was to start--Dick Bokum and Bob Dodge came into my office and said, "What's the lowest you've paid for trucking so far?" I made a big mistake, but I said, "Five cents a ton mile," because we hadn't paid anything on four-and-a-half yet. It was just going into effect that day and we wouldn't get a bill on it for another month. We were on a monthly billing basis.

Chall: Did you know the import of their question?

Swent: No, no I didn't. So then they told me about the deal with McLaughlin. This was the first I'd heard about it. They said they were going to haul it at five cents a ton mile, since that was the lowest we'd paid. This left me dumbfounded. So when they left I called Ab Shoemaker to confirm this, and he told me, unfortunately, that it was true. And I said, in essence, "This undoubtedly will put Red Waldie through bankruptcy, because he's bought this big fleet of trucks and now he'll have no income." So I immediately warned Red. Sabre-Pinon wasn't ready yet to do the hauling. They had some more arrangements to do.

The cut-off came a week or two later, when Bokum was finally ready. Since they had to park them overnight they built a terminal for maintenance of their trucks on a piece of the mill site that we lent to them. Then they began hauling. I had to tell Red that we couldn't use him any more. That was real tough.

Chall: Yes. When you say you were dumbfounded--that's one emotion. But if I were in your place I think I would have been furious.

Swent: I was, too.

Chall: I think it would have given me an ulcer. How do you take that sort of thing, or at that point how did you take that sort of thing?

Swent: Well, I was certainly all worked up about it. I was very upset over it. But there was nothing to do, and I had to learn to live with it.

Chall: No appeal? Because they hadn't, after all, done anything yet.

Swent: No, but McLaughlin had made the deal and he wasn't going to change it. Then one day Bob Klebenstein, who was the manager of Calumet and Hecla, called me to say that the trucker he had been using to haul their custom ore to our mill had quit, and he wanted to know who we wanted him to use. Well, I saw this as an opportunity to give Red some business, to maybe keep him from going under, so I told him to use Rocky Mountain, which he did. But when this got back to Bokum, that raised all kinds of problems. He was furious. He said I should have had Sabre-Pinon truck it, since Sabre-Pinon was a partner, and that I didn't have the best interests of the partners in mind.

On a trip to San Francisco he asked John Gustafson, who was the new president of Homestake, to fire me, but John refused. Bokum was really mad about that, mad for a long, long time. Anyway, John refused to fire me, but later he told me privately that he would not have done what I did. He said he would have referred it to Sabre-Pinon.

Eventually Red did go through bankruptcy and lost all his trucks, and then went to work on a salary basis with an outfit called Anderson Brothers. These were two brothers who were the sons of Carl Anderson, who was the largest stockholder in Kerr-McGee Nuclear Fuels. Kerr-McGee had set up a corporation called Kerr-McGee Nuclear Fuels for the uranium operation. They had essentially four ventures in it: Kerr-McGee, Pacific Uranium, I forget, somebody else, and then Carl Anderson. What they had done was say that whoever has the most reserves on a certain date, or whatever the ratios of reserves was on a certain date would

determine the stock ownership in the company. Carl Anderson had wound up with the largest reserves, so he was the largest stockholder. He set up a company for his boys and they were doing haulage. That's one of the things they started doing. So they hired Red and began doing the haulage. Red became their foreman and he ran their trucking operation for many, many years.

They put young Maxie Anderson in charge of the trucking operation, to give him some business experience at least. He was only around twenty years old or so, just getting started in the world. The Teamsters tried to organize them, so Maxie came down to see me one day for advice on how to handle the labor situation. I asked him what they were doing, and he was just doing almost everything wrong according to labor law. So I referred him to Pickering. He was a real fast learner; he turned the trend around and eventually they won an election and stayed non-union.

In 1961 when the consolidation of Homestake and Homestake-New Mexico Partners took place, I suggested that the trucking be put into the partnership, rather than being done by Sabre-Pinon as an outside party. They were also going to do this with Blackjack #1 and #2 mines, which Sabre-Pinon was running on the outside of the partnership. So all these things were put in, and the partnership became a real hybrid one where Homestake was operating the bulk of things. But there were a few things, like the trucking and the Blackjack #1 and Blackjack #2 mines that Sabre-Pinon was operating. The fellow that they put in charge of the trucking was a very live wire, a fellow named Billy Biava. He did a good job of it. He was a shirt-tail relative of Bokum's from Gallup and later became very much of a right-hand man for Bokum, especially on the U.S. East Coast.

Sabre-Pinon Merges with United Nuclear Corporation

Swent: Somewhere in 1963 or 1964, I'm not quite sure when, Sabre-Pinon merged with a failing company called United Nuclear Corporation.

Chall: Oh, that's where it came.

Swent: United Nuclear Corporation was a sort of high-tech company that had some contracts to produce fuel elements for naval reactors and to do a certain amount of research work for the navy and the AEC. They're primarily an eastern company, and they did have one facility in Hematite, Missouri, where they converted enriched UF6 back down to enriched uranium oxide and then made the fuel elements from that that they sold to the navy. But they weren't doing very

well, and Dick Bokum thought that he could take this company over and build it up. He thought he could see the free market coming and that he could have an edge by having an integrated company that had uranium right from the ground all the way through to the making of the fuel elements, and that they could get into the free market from making fuel elements. So they merged with it. Sabre-Pinon was the surviving corporation. But the name United Nuclear Corporation was known to the navy, and they had a lot of dealings with Admiral Rickover. They figured that since he knew the name that they didn't want to throw a new name at him, so they changed the name of Sabre-Pinon, even though it was the surviving corporation, to United Nuclear Corporation.

Chall: I see. I wondered where that name came from suddenly.

Swent: So they became United Nuclear Corporation sometime along in there. It took a while for that to take, but it stuck.

Unexpected Problems Locating Ore Bodies

Swent: Well, it was a challenging time. Let's see, that was sometime in '63. Our mines by then were well under production and well matured and we were making a good tonnage from the partnership mines. We had had some troubles getting started in all of them, really. The one that we had the least trouble with was Section 23, and that was because we tackled it last and had the experience from the other ones, I guess.

Section 25 we had a terrible time with. When we sank the shaft, according to the logs we had of the holes drilled there, the station--that is, the bottom of it, where we were going to cut out --would be in sandstone, just above an underlying shale formation called the Recapture Shale. And shale is a terrible thing to try to mine in or do anything in.

Well, it turned out that there was some problem. The hole that we had drilled had just hit a particular low spot in the sandstone and in reality the Recapture Shale was higher than we expected it to be. We had to build a lot of that station, cut it in Recapture Shale rather than in sandstone. This caused us lots of problems of ground support. It took a lot more time and expense.

Then we started drifting. The first ore body that we wanted to get to was to the east. We had to drift entirely in the Recapture Shale. Well, at first this was all right. The Recapture

Shale was a dry-type shale and it didn't make any water. It was below the water, but shale is very tight and didn't let any water come through. It was a formation that would slough a great deal. It wouldn't hold very well, and we had to timber our way through all of it. Then, when we got out a little ways, then the Recapture dipped down and we came up into the Westwater Canyon Sandstone formation, which was wet. Then, of course, the water began running down the drift into the portion driven through the shale, and it made a terrible mess. It's just like putting water into clay; it just makes mud out of it. It was quite a mess, but we did learn to live with it.

Then, when we had raised up into the first little ore body, we drilled into it from below and got a lot of water drained out of it. Then we went in and tried to start developing it with slushers, and couldn't find the ore very well. One of the things we found was that the deviation of the holes was considerable. This was close to between 700 and 800 feet of depth, and the holes did not go straight down. Everybody up until that time had just drilled holes and assumed they went straight down and that the amount of deviation was a negligible amount. Well, we found that this wasn't true, that the deviation was not negligible. You would aim for a certain spot and expect to get there and find the value that was there in the hole, and you would get there and there would be no hole. Couldn't find the hole. The reason being that the hole had deviated and might be ten or fifteen feet away, maybe even twenty feet away.

Chall: Was that a result of the kind of rock you were going through? What would make that happen?

Swent: Well, it's the dipping of the beds. Long strings of drill tools tend to turn until they're perpendicular to the bedding that they're drilling through. So after that experience we took to surveying all the holes that we drilled. In fact, we did a little re-drilling and surveying of holes.

We also had troubles up in Section 15, except there it was even worse. Up there we had some different problems. In one place we found the hole we were looking for, in what we called a three-hole ore body, a little ore body that we'd drawn around three holes that were close enough to each other. We thought that they represented continuous ore. The first hole that we went to was supposed to be a hole that was a good high-grade one. It turned out to be a hole that had gone right down a little fault, and the mineralization was in the fault. The ore wasn't horizontal and contiguous with the ore in the other two holes at all. So we didn't find the ore there. We had to scrounge around and finally

found it, but it was off in a different direction. All of this was very frustrating in the early days.

Chall: Could you ever be sure of where your holes were going? I mean, there was no way unless you dug in.

Swent: Well, you could survey them.

Chall: How did you survey them?

Swent: Oh, there are several ways. One thing is to put a little bottle with acid in it down and a little compass in it. You've got to let it come to rest and leave it for a while. The acid surface remains horizontal, and etches a line on the glass container, which is sort of like a test tube. So that gives you the inclination of the hole at that point from the horizontal. The compass is fixed in its direction at that point by the acid action. Then they have little tiny cameras that you can put down and photograph a compass. And that gives you the direction in which the hole is going. There are many more sophisticated methods now.

Kerr-McGee had the same problem; it was not just ours. Actually the history of all this had been that in earlier uranium developments up in the Moab area, for instance, the depths had been much less. We're talking about two or three hundred feet of depth, and the holes couldn't wander as much in that distance, so they were pretty accurate there. But when we got down to four hundred to eight hundred feet, then they began wandering and had to be surveyed. Kerr-McGee had the same problem on Section 10. This section had a dry ore body. They were going to really get going fast by developing Section 10. And they couldn't find the ore either. So they went back to the surface and drilled out the holes again and surveyed them.

Chall: My, there's a lot of expense in there that no-one ever expected.

Swent: Yes. But we overcame all of that and finally found where the ore was. We got to be able to judge on unsurveyed holes what the offset would be from the true to the theoretical locations, and made allowance for it. Then, of course, all new holes were surveyed.

Chall: So you were saying that by 1963 most of these problems had been resolved?

Swent: Yes. We ran into these in '58 and '59 when we were first starting. By 1963 they were straightened out.

Some Ramifications of the Atomic Energy Commission's Stretch-Out Contract, 1966-1970 ##

Swent: We had straightforward operations, I guess, although the AEC business never ceased to be a fascinating, changing show. In 1962 the AEC announced another stretch-out program. This was a stretch-out to 1970, from 1963 to 1970. They wanted to reduce their annual amount of purchases. They had more uranium than they needed for the military program, and everything that they were buying was just being stockpiled. It would some day have to be disposed of on the industrial market. So they just wanted to buy less and less of it each year.

The proposal was that if you wanted to stay in the uranium milling business until 1970, at which time there was a possibility that the free market would have developed--the commercial market--that you could do so. You could take any amount that you wanted from your pre-'66 contracted poundage of U3O8 and postpone delivery into the 1966-1968 period, and the AEC would buy it at the old contract price. For the 1969-1970 period, the AEC would buy an amount of uranium equal to the amount stretched out into and actually delivered in the 1967-1968 period. It would buy it at a formula price. The formula price was 85 percent of your cost in the 1963-1968 period plus $1.60 a pound, plus escalation based on the wholesale commodity index. They set a maximum price of $6.70 per pound of U3O8.

Phillips Petroleum had an AEC contract expiring December 31, 1966, but weren't sure that they wanted to go ahead with the business. They hadn't had very good luck in it. It had been a real headache to them. So Bokum asked us about trying to buy them out jointly. His idea was to buy the Phillips mines, mill, and AEC contract and add them to the partnership, then stretch out the combined contracts under the AEC 1970 proposal. This would enable the partnership mill to run at a high capacity during the stretch-out period. Without such an addition, the partnership mill would have to operate well under its optimum cost capacity for the partnership to stretch its deliveries out. We didn't think they would sell out at anything reasonable, so didn't agree to trying to buy them out jointly.

So Bokum talked to them and asked them first of all to project all the money they could make if they kept operating, and they came up with a $28 million figure. So he offered them $28 million, cash on the barrelhead, to buy them out as of March 31, 1963. Phillips accepted after a few days.

In the meantime Bokum offered, as he had to under the partnership agreement, 25 percent interest in this acquisition to Homestake. We looked it over very carefully as to whether we should participate and then pay our 25 percent of the $28 million. An attorney from San Francisco named John Naff was doing most of the legal work now for Homestake on partnership matters. He and I went to Bartlesville for several days to look through all the Phillips underlying agreements, their leases, their land holdings, their custom ore contracts, their AEC contract--all these legal aspects of it. It didn't really take as long as I thought it would, because they were all very similar documents to ours.

It looked as if it might be feasible, according to the analysis that we did. Dick Stoehr was working on it, and we had accountants working on these projections. I had to supply input for those. It looked feasible, that we could make money doing this. But Dick Stoehr pointed out, saying in essence, "Well, you know, there's a big entry fee. That $28 million is a big cash outlay. Then we'd have to spend the next several years getting the $28 million back. It isn't until the very last year or so that we actually come out with any cash flow over the $28 million that we've put out." He suggested that instead of the partnership putting out $28 million to begin with, we agree to toll-mill the ore for Sabre-Pinon, let them buy the Phillips mines and mill themselves and let that be owned by Sabre-Pinon. We would just toll-mill the ore and return the yellowcake to them, and they could sell it under the Phillips-AEC contract. Homestake would benefit from the beginning by sharing in the reduced milling costs and in the toll milling charges, and thus have a significant increase in cash flow from the beginning.

Now both the Phillips and our contracts would have to be reduced in tonnage to get into this 1970 stretch-out program. What this did for the partnership was that either way, whether we toll-milled it or whether we went as partners in it, Sabre-Pinon would be shutting down the Phillips mill and running the tonnage through the partnership mill, thereby keeping it at capacity instead of making it operate at a more costly, less than maximum capacity. So either way it had a lot of virtue for the partnership.

Homestake Negotiates a Complex Toll-Milling Agreement with Sabre-Pinon

Swent: Anyway, Dick Stoehr won the point and we decided to turn down our 25 percent interest in the Sabre-Pinon purchase and to just toll-mill the ore at the partnership mill.

Chall: Would that satisfy them?

Swent: Well, Bokum was furious at this. He wanted some help on the $28 million, and he was also afraid that we would cheat them on the recovery. So we wrote out a very formidable toll-milling contract in which we got samples of the various ores from the different mines that were involved, and did experimental work to find out what the extraction would be on them.

Now, I have to distinguish at this point between extraction and recovery. Extraction is what you actually leach out of the ore. But when you discard tailings there's a certain amount of liquid that goes out with those, and that liquid has some uranium values in it. It's unavoidable; you can't get it down to zero. That's called the soluble loss. Recovery is the extraction less the soluble loss.

So the arrangement we made was that we had a table of guaranteed extractions at different grades, based on the tests that we'd done. Then the recovery that we would give would be the extraction that the grade called for, less the average soluble loss. Whatever our monthly soluble loss was, we would use that loss against their recovery. We were helped a lot by Al Ross in writing up this contract. We finally got the toll-milling agreement signed. It took a long time. Then Bokum closed with Phillips and then the AEC gave Sabre-Pinon and the partnership a letter allowing this toll-milling to take place.

From then on, for years we did the Sabre-Pinon accounting for yellowcake shipping. This was a real headache because we shipped it in 55-gallon drums which weighed about 1,000 pounds apiece. We shipped them to the AEC generally to a place called Weldon Spring, Missouri, not far from St. Louis. There they sampled the drums by putting drills down through, and all the cuttings would come up on a pan. They'd drill through a pan that had holes laid out in a pattern. They had an auger drill that went down through each of these holes. The yellowcake that it brought up became the sample. Then that sample would be put in for a moisture determination. That was fairly complex because some of the minerals in the yellowcake had water as a mineral constituent, as well as just entrained moisture, but all they wanted to do was to figure the entrained moisture.

This was a fairly complex situation, and then of course they weighed all the drums. With the moisture content and the results of the assay they got the net weight of yellowcake received. Now, before determining the final assay they had to exchange assays with us. They sent us a little bottle with a sealed sample of the yellowcake.

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The moisture content of this sample would vary with the humidity of the air to which it was exposed. So we couldn't do a moisture determination. We could do the assays. Then we would exchange assays, and if the assays agreed within .005% U3O8 we would split the difference. If the difference was greater than .005% U3O8, then it went to an umpire assay. The umpire lab would get a sample sent in another jar. Well, this all took weeks, so you didn't know for weeks how much uranium you were getting credit for in a given shipment.

So as to not hold up the flow of cash, you were allowed to bill something like 80 percent of your estimated amount. When you shipped you gave an estimated assay, and you could bill 80 percent of the amount of money that would be due based on that assay. Then a final adjustment in money was made when all the final assays and weights were agreed on, which took many weeks. Anyway, we undertook to do this for United Nuclear since they had no experience in it. They shut the Phillips mill down and just had nothing to do with milling anyway.

Phillips laid off all their people, and this was a real mess. Rumors were going around for several days before March 31 that something was doing, but Phillips gave no warning to their employees except on April 1 when they came to work and they said, "You have no jobs." Phillips had been allowing them to live in some of these houses rented from Hughes, and they told them they had to get out of the houses. These people just went wild. They were furious. And I don't blame them; I thought it was a terrible way to handle it. Some of them went back and pulled toilets and sinks off the walls and off the bases and kicked walls in, and just did lots of damage to these houses. The contract for the houses was to revert to Sabre-Pinon. There was a very, very bad reaction in the whole community. Everybody was on the workers' side and thought that Sabre-Pinon and Phillips had done this very, very badly. And I agreed. We never did that to any of our people; we always gave them plenty of notice, or had some arrangement whereby they could stay on until a termination date.

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We didn't realize what we were getting into when we started negotiating the stretch-out contract. The AEC required us to submit our costs during the base period. This meant we would submit our costs for the '63-'68 period. We would submit our costs for those six years and they would audit them and then determine what our price would be for the next years, based on 85 percent of our average base period cost plus $1.60 a pound, plus escalation,

with a maximum of $6.70 per pound of U308.

Chall: That was a fixed amount then?

Swent: Yes. It would be a fixed price, just like we had before, but different for each producer. We had a price of roughly $8.00 a pound before. The price for custom ores that they would pay you was $6.70 a pound for yellowcake produced from custom ores. If your costs were such that you were entitled to a price higher than $6.70, they wouldn't pay it; $6.70 would be it. But I don't think there was any mill in operation that had costs that high.

What turned out to be the real tremendous chore was preparing the contract. The contract itself was not too difficult to negotiate, but the contract called for an appendix on costs and on the auditing procedures and an audit of our development costs. And this appendix turned out to be three times as thick as the contract itself; a tremendous job. They went into every phase of costs and how things would be allocated, that is, indirect costs; what values were to be used for depreciation, whether they were going to use the original values or the values at the time the contract was signed; a whole bunch of variables. It just took literally years to negotiate this through. We began operating the mill on a stretch-out schedule on April 1, 1963, but we didn't get the contract signed until June, 1965. Under this contract we stretched out 4,104,588 pounds into the 1967-68 period and had that amount added to our prior contract for 12,578,651 pounds, raising our total contract to 16,683,239 pounds, with fairly uniform sales of about 2,100,000 pounds per year.

Then one of the things they had to do was audit the administrative and general expenses and some of the original expenses of setting up the mines and mill. They would give you credit for a portion of your shaft costs and this sort of thing. But they had to go in and audit all those things and be sure that the costs that they were going to share were the correct costs.

Well anyway, they did this extremely comprehensive audit. It was about an inch thick, extremely complicated, with fold-up pages and everything, all sorts of spread sheets. Then they sent it back down to us for review. On the second day we found a colossal error! They had transferred a figure from one page to another and in doing so had reversed a couple of digits, and this made about a $400,000 difference. So we pointed this out to them and they were very embarrassed. And the more they looked into it, they said, "Oh my God, this is terrible," because the results from the sheet on which this incorrect number was entered were then used in a whole bunch of other sheets. The auditor said, in essence, that mistake just ricocheted through the entire audit. It took him weeks to get that cleared up. Negotiating that contract was a tremendous undertaking.

Chall: Do you think that it's possible to get all that data down so perfectly that they can really analyze costs on the basis of it, or is a lot of it just work dreamed up by people who don't understand the business?

Swent: Well, they understood the business all right, and I have to respect them for doing a very thorough job. The fellow who had charge of it was named Lee Erdahl, and we negotiated with him till I was blue in the face. Later on United Nuclear hired him, and then he left United Nuclear and went to Ranchers Exploration and Development. We became very good friends; still are. One of his problems was that the AEC tried to transfer him to Washington, and when he relocated he found out that his daughter had terrible allergy problems back East, and they had to come back West. So, he had to leave the AEC, and he went to work for United Nuclear. He wound up on the other side of the fence when it came to price determination on their contract.

Chall: So you think all of that auditing is necessary?

Swent: Unfortunately it was. It was a tremendous bureaucratic undertaking, but it worked.

Investigating the Custom Ore Scheme

Swent: One of the major results of this Phillips takeover was that we were then getting the Phillips custom ores. And we had expected this. What we had stated in the toll-milling agreement was that we would do a separate amenability test for each of these custom ores and determine its extraction separately, because they were erratic. You're subject to getting new ones and that sort of thing. We did some of the old ones that were for steady customers and set the extractions for them. But for the new ones, and any new ore bodies that United Nuclear might find, we had to do the amenability testing.

One of the things that we had was a little piece of ground on the way out to Ambrosia Lake. It was rather small, but it had a little bit of ore on it with a grade of about 0.20 percent U3O8. It was only 3,000 or 4,000 tons, so we figured this was too small for us to tackle, and we had leased it to an elderly custom ore operator named E. P. Moe, and under the terms of the lease he was to ship the ore to us. Well, old E. P. decided he didn't want to tackle it so he sub-leased it to a fellow named Lloyd Sutton. Just before the Phillips closedown was when we found out about this, that he was sub-leasing it to Sutton. Because Sutton had been

shipping his other ores to Phillips, we told E. P., in essence, "Tell Sutton that he's supposed to ship that ore to us and not to Phillips." And Sutton was well known--in fact, he had a very good reputation in the district. He went into mines that other people had given up and always managed to come up with a small but high-grade tonnage.

Well, Sutton came down and said, no, he'd been dealing with Phillips for years and he didn't want to change the relationship. He had confidence in them and knew their system and this and that. So I said, "Okay, you can ship it there then." It really wasn't that important to us. Well, this was a big blow to him when Phillips shut down. So he came by a few days after the shutdown. He said, in essence, "Well, we're going to have to ship it here anyway. But before I do that I'd like to have a trip through your sampling plant and see how it's sampled and see that it's sampled correctly." So, sure. I had somebody from the mill take him through the crushing and then the sampling plant. I didn't hear anything more about it for a while.

Then, maybe a week later or so, Jack Jones came in. He said, "This is probably a real fancy story, but I want you to listen to one of my men. It just boggles my mind." So I said, "Okay, I'll listen to him and see what he has to say." So he brought this fellow in named Frank Nipper, who worked in the sampling plant. Actually, he was a shirt-tail relative of a Dr. Kilpatrick who worked at the Grants Clinic, whom we knew and had a lot of respect for as a doctor. Nipper was a little bit difficult to understand at first, but it finally developed that when Lloyd Sutton went through the mill to see the sampling plant, he had a guide, somebody taking him. And at one point he fell behind and saw somebody working in what we call the sample preparation room. He went in and talked to him, and it was Nipper. He didn't spend much time. He just said, "Do you work here regularly?" or something, and Nipper said, "Yes." Then he went on and caught up with his guide.

A few nights later Sutton had called on Nipper at his trailer where he lived--I don't know how he found out where he lived, but anyway, he did--and made a proposal to him that when his ore was crushed and sampled and then the sample was--. What we did was we caught the sample in a big barrel. We would normally sample 1,000 tons, or if it was a special shipment like from a custom ore shipper that couldn't make 1,000 tons, whatever the amount of tonnage he'd ship would be the lot size. It was 300 tons in this case. He said to Nipper, "I'll give you some paper bags with some fine ore in them, and I want you to empty those into the barrel where the sample is gathered, sometime while my ore is being

sampled." And he gave him three little paper bags full of this very finely ground material.

Well, Nipper knew there was something wrong with this, so he brought it to us. After we got to learning it all, we saw that it was really a salting scheme. Nipper brought the three sacks in and we looked at it. We could see that it was really high-grade limestone ore, which was the same type of ore that this little prospect had. And it was very high-grade. So if he dumped that into the sample it would raise the average value in the sample, and then when we analyzed that it would raise the average--say if it was twenty hundreds, but he had dumped in enough material to raise the grade to forty hundreds, we would pay Sutton on the basis of forty hundreds for that ore. We would be paying out a lot more money than was right.

Chall: What was Nipper to get out of this?

Swent: Well, he was going to be paid something. I've forgotten what. Several hundred dollars.

Chall: Golly, the schemes!

Swent: We said, well, we've got to trap this guy. I got a detective agency on the job right away. We had used them before on a couple of other jobs. They decided they would put a tape recorder in Nipper's trailer and try to record the conversations when Sutton came there. Well, it took a little while for all this to get arranged. The next time somebody else came; it wasn't Sutton. And the guy came and talked and talked and talked, and we got about a whole reel full of talk, but he didn't talk very much about the deal. But it did come out that this fellow had worked in the Phillips sampling plant, and had been Sutton's inside man at the Phillips sampling plant and was doing the same thing there. So that was why he had wanted to ship the ore to Phillips.

Chall: Yes, of course.

Swent: At any rate, at one point Sutton did come by, but he didn't come inside the trailer and the tape recordings on him were a little weak. Finally the day came when he shipped the ore from the mine. So we set a certain date that we were going to sample it and we let him know. He had said he wanted to see the sampling. Anybody's entitled to see the sampling. So we let him know when we were going to sample it, and we sampled it. Nipper had these little bags but he didn't dump them in.

Then we brought charges and had him arrested. He had a hearing before the justice of the peace, John Horacek, who had

beaten out Sakelares. Had a long hearing there, but under New Mexico law that's the first court of hearing. Then the justice of the peace decides whether there's enough evidence or enough crime to buck it up to a superior court. We went through about two hours of evidence and finally the justice of the peace decided that's enough and he bound Sutton over to superior court. Well, nothing ever came of that.

Let's see, Ted Howden was prosecuting attorney for the county then. He had been mayor of Grants and I knew him personally. Ted said, in essence, "Well, if you want, you can name a private attorney as a prosecuting attorney. If you want to, you have that privilege. But you have to pay them." I didn't think it was worth doing it. We could have named the Bigbee firm, but I didn't think it was worthwhile. Howden said, in essence, "You've got lots of good evidence, but these guys have lots of ways of getting out of these things."

Chall: Wouldn't this have been a federal offense? He was tampering with a mineral that was really under federal control at that time.

Swent: Well, it's not under federal control basically until it's made into yellowcake. At any rate, we were never able to get him to trial. They did set a little trial and then he didn't appear. His attorney had a note from a doctor that he was ill and so they postponed the trial. The next time they set it they had another note from him, and his attorney had it there and said he'd been over in Arizona and had fallen down a mountainside, down a cliff, and had been severely injured. I think this was true; I think he was injured. So it was again postponed, and it never came to trial, but he never came back either.

Chall: What happened to his little mine?

Swent: Oh, that reverted to us, of course, or reverted to E. P. Moe and E. P. Moe let it come back to us. Sutton had mined it out in that one shipment so that the ore was out.

Chall: What a story. And it had been going on with Phillips for years and nothing was known about it?

Swent: Well, yes. So after United Nuclear took over we got hold of the Phillips records and went over them to see about the shipments that he'd made and the mines that he'd made them from. As I said, he had had a reputation of being able to go into mined-out little mines and make small but high-grade shipments. Now that we knew the reason, we figured that in total he had done Phillips out of about $100,000. The Phillips people looked into this. They came out and saw it all, saw the evidence, and were kind of upset about

it. At first they were going to try to file suit. Then they decided they would rely on their employee fidelity bond. This fellow who had worked in the sampling plant was their employee and he'd been bonded. They had a $25,000 deductible on that, but they decided it was cheaper to take the $75,000 rather than to try to push a case and recover the other $25,000.

Chall: I see. Well, never a dull moment there! You really had your problems with this Sabre-Pinon group, didn't you, one way or another.

The German Utility Contract

Chall: Is the stretch-out contract what led the Homestake-Sapin Partners in 1966 to sell 628,000 pounds of uranium outside to the German utility the KRB?

Swent: No. This came about through United Nuclear, actually, and through a program that the AEC adopted in order to try to bring the private market a little closer. At that time the Atomic Energy Act did not allow the U.S. enrichment plants to enrich foreign uranium for use in domestic reactors. There was no restriction on the enrichment of foreign material for foreign reactors or U.S. material for foreign reactors. The U.S. government was free to do that.

Chall: At any time? I mean, even before '66?

Swent: Well, I think in '64 the act was revised to permit private ownership. Up until '64 private ownership of licensed material wasn't permitted.

Chall: I see. Oh, it was after '64 that it was?

Swent: Yes. In 1964 the act was revised and permitted private ownership. This was a big step, which got lots of publicity. The AEC worked out what they called "barter arrangements" whereby the buyers, like KRB [Kernkraftwerk-RWE-Bayernwerk, G.m.b.H] had to buy the natural uranium from a domestic producer and have the uranium shipped for enrichment. But the AEC would not actually enrich it.They didn't want to go to that expense. They would just take out of their stocks the proper amount of enriched U3O8 and then deliver that to the buyer, KRB, for the enrichment fee. But they didn't actually enrich it. There were three or four such deals made under that arrangement. United Nuclear with their acquisition of the old United Nuclear, and being in the fuel element business, had good contact with KRB. So they negotiated the terms of the contract

with the full intent that it would be assigned to the partnership to fulfill. They had several negotiation sessions with KRB.

United Nuclear asked me to attend the last couple of sessions down in Washington. They asked us to draw up a contract. A fellow named Harl Bird, who was with the Bigbee firm, and I drew up a first draft of a contract and gave it to United Nuclear people to present to KRB. In it, of course, it provided for the assignment of the contract to Homestake-Sapin Partners. And when the KRB people came to that they said, "Who's this? We've never heard of them." So the United Nuclear people--the chief negotiator was a fellow named Bill Bush--explained to them that we were their partner and that we were actually producing the uranium. This was just a matter of convenience. If the KRB people wanted to, they could come out and visit the mill and all this. "No, no," they said. "That's all right. We'll take your word for it." There were no more problems with it.

So we signed the contract in 1966. We announced it publicly. I was glad to be able to make an announcement. I thought this would help everybody's morale so that they wouldn't be thinking that they were with a declining business.

Chall: Yes, right. It was March 22, 1966, the article I saw in the Wall Street Journal.

Swent: Yes. Anaconda made an arrangement with Westinghouse, and I think it was signed maybe before ours, but they didn't announce it for some reason. I think Susquehanna Western made an arrangement with another foreign utility to do the same thing. There were several of these all being done about the same time.

Chall: So it provided you with an outlet for all that material that the AEC wasn't going to take anymore.

The Allied Chemical Contract: Enriching the Uranium

Swent: Yes. But it had all kinds of complications that put us in the forefront of blazing new paths. One of the problems was that all of this elaborate sampling of yellowcake and exchange of samples and moisture determination and all this had to be formalized in a contract, which was really a three-way contract. The chain of events was that we were to ship the material to a commercial plant at Metropolis, Illinois, owned by Allied Chemical, who had gotten into the business of converting yellowcake to UF6. The plants that we had previously shipped to at Weldon Springs were government-

owned plants. And Allied's process was to convert the yellowcake, which is essentially uranium oxide, in to UF4 and then up to UF6, in two stages. UF6 is a material that's sort of a white dry powder but at room temperature will sublime into a gas. It has to be kept under pressure in order to keep it from gasifying. This material--UF6--is put through the gaseous diffusion plants because of its gaseous properties. To go through the AEC enrichment plant it had to be in gaseous form. But instead of having the government do that converting the AEC insisted that it be done by a private industry enterprise. And Allied Chemical was the only one that had a private industry plant to do it.

The AEC was trying to establish a commercial industry. Allied Chemical had built a pretty expensive and good plant. We were to ship the material to there, they were to convert it, and then they would ship it to the diffusion plants. I think the closest one was Paducah, Kentucky. But the problem was if we shipped 1,000 pounds of U3O8, or what we thought were 1,000 pounds of U3O8, to Allied Chemical and they sampled it and we exchanged assays with them, and it resulted that there was only 998 pounds of U3O8 to be paid for, then the amount of UF6 that they were to give back to KRB, technically to take to the enrichment plant, would be based on the final agreed weight of what we delivered to Allied.

Well now, actually we had to have what we called a three-way agreement on these numbers. We had to have agreement between Allied Chemical and ourselves and KRB that we had shipped 998 pounds or 1,000 pounds or whatever it was. Because there was going to be a mess if we shipped something and Allied said, "Well, that's 998 pounds," and then they turned around and dealt with KRB and <u>their</u> numbers came up that it was 996 pounds. We wanted all these numbers, whatever they were, to turn out to be the same. One way to solve this problem was for KRB to agree to be bound by the figures agreed to by Allied and us, but theoretically then KRB had no say in the outcome and Allied and we could collude to raise the weights involved.

So I finally negotiated with Allied Chemical and KRB a three-way contract, and it took a long time to do this. Allied and KRB didn't understand this part of the business. I had been through it before because I had sold concentrates to a smelter in Mexico for San Luis and had gone through this assay business and the umpire assays and all that.

Then a big, big stumbling block came up with Allied Chemical--this is something the AEC had never wanted, but Allied Chemical wanted a guarantee that the yellowcake that we shipped would contain .7311 percent U235. And I said, "There's no way I can guarantee that, or the partnership can guarantee that. We have no

control over it." We finally settled for a clause that said we would not change the isotopic composition. This in the long run turned out to be a great precedent for the industry.

That was the final way the industry accepted it when the big commercial market came along. A lot of the utilities didn't know all this, and they wanted the same guarantee, that it would be .7311 percent U235. And there's just absolutely no way that a voluntary producer can guarantee that in advance. You might assay it and find out what it had and say "It's got this in it." But they didn't want to do that. They wanted a guarantee in advance that it was .7311 percent. So we broke a lot of ground in negotiating those contracts with KRB and Allied Chemical, and made some very good contacts with the KRB people.

Chall: Which continued much beyond this time period?

The Stella Dysart Contract

Swent: Yes, right.

Let's see, there was another phase there that I thought of a moment ago. Well yes, I have to go back. Probably one of our great accomplishments, before the stretch-out contract, concerned Stella Dysart. In addition to owning the southwest quarter of Section 11, the Rio de Oro Mine, she owned but had not leased out the northwest quarter, which also had ore on it. She finally leased that to a corporation named the Entrada Corporation. They tried to mine it. It was kind of low-grade.

Anyway, we wanted to buy that as custom ore. It had under the allocation program that the AEC had established, I think in '62--an allocation of somewhere around a million and a half pounds of U3O8. What the AEC did in the later contracts was to provide that the operator could add a custom ore producer and property to the contract after the contract was signed. When it was signed it listed all the different allocations covered by the contract and what the total amount of uranium was that you were going to sell. If you signed up another custom ore producer, you were allowed to add the property and the remaining allocation to your contract. Under the stretch-out contracts you would get $6.70 per pound of U3O8 derived from custom ores, which was probably a better price than you were going to get on your own yellowcake.

At any rate, we thought that this was an allocation big enough to be worth going after. Entrada Corporation was not having very

much luck with it. We tried to make an arrangement to toll-mill it for them, and they got as a consulting engineer a fellow named Roger Pierce, whom I had known back in my Tayoltita days. He had been a traveling salesman in Mexico for Ingersoll-Rand and had even written an article about Tayoltita for Compressed Air Magazine. My dad thought a lot of him and I had respected him a lot. We'd been friendly for many years. Well, they engaged Roger to advise them on the mining and on negotiating a toll-milling contract or a custom ore contract. We were out of the days of Circular 5 by then. You couldn't pay Circular 5 for these ores any longer, as prices were going down, that is, yellowcake prices.

So Roger came in to do the negotiating and I soon found that Roger, from his other mining experience--and he had vast mining experience--felt that he could estimate what our milling costs were. So I let him go ahead and estimate them, and he estimated very high. I didn't let him know that. So he advised his client to negotiate a contract that allowed for what he thought was a high milling cost, and returned very little money to them. In a way, this was to our benefit. They tried mining it, and eventually they just couldn't make any money under this custom ore contract.

So they gave up the lease and let it revert back to Stella Dysart. Once it got back to Stella Dysart I suggested to the partners, including Bokum, that we try to get this leased from Stella. Dick Bokum said, "Well, write out a proposal." So I wrote up some kind of proposal and sent it to him. He wasn't very happy with it. He apparently had better acquaintance with her than I did, and he went down to negotiate a purchase. She wasn't trying to mine it herself. She leased it to a company called CT Mining, which was her own company and had Rodney De Villiers in it. A few days before she had done it she said, "I don't trust Rodney at all." Then she turned right around and put it into this company that he was involved in! They had their own mine superintendent from Rio de Oro named Ray Schultze to try to mine it. We let him have the same custom ore agreement that Entrada had had. And it didn't work out either.

So then Bokum went back and made his offer to buy the property from her. Well, she was pretty cagey. She didn't want to sell it. Finally what they agreed on was that she would sell it to us and we could keep it until December 31, 1970. At that time we had to sell it back to her at fair market value. The same thing also held for Section 10, which had been the lease that Kerr-McGee originally had. They had mined it out and then pulled out, but it had some reserves left that had an allocation on it. She also wanted Section 10 back after 1970. So he made these two proposals to her and she accepted to sell both properties to the partnership until December 31, 1970.

Then it fell to me to negotiate the details of the contracts, the wording and all that, with Stella. We did this over a period of several months. And we tried to put it to the AEC. This was low-grade ore. We tried to get the AEC to agree to change the allocations from the custom ore list to the partnership ores list. They had done this in a few other cases. They said, no, they couldn't do that, it was too low-grade; we couldn't make money at it. It still had to stay in the contract as a custom ore. They wouldn't change the classification of it unless we could show that we could make money on the property by itself. Our objective was that if we could get the allocation added to our partnership allocation, we could produce those pounds of U3O8 from wherever we wanted to. We could produce the same number of pounds from higher-grade mines at a considerably higher profit. We wouldn't have to produce these pounds from low-grade ore on the northwest quarter of Section 11.

The AEC realized this and that was why they said, "You can't make money on it, so therefore we won't add it to your contract." And I insisted that we could. They said, "Well, send us an analysis of how you can do it." I used what I called the incremental cost approach on it. You have a mill that's going. If you add a certain amount of ore to it, if the ore isn't an unreasonable amount, you don't have to add any people. You have flexibility in your capacity. I did the analysis on the basis of no labor cost in the crushing and grinding. Well, there would be some labor cost; you have to work them overtime, maybe longer hours, but that was all.

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The allocation would be mined out entirely under the 1970 contract, regardless of how many pounds were involved. So I said, depreciation wasn't a factor. So we came out with a ridiculously low milling cost. Now, with the mining you couldn't do that; there would be an additional direct cost to mine it. But then there were a lot of administrative and general costs that wouldn't change. All our office costs would stay roughly the same.

So I made out a proposal based on this and sent it to the AEC in Grand Junction. They looked at it and looked at it and came down and checked some with us. Finally Alan Jones, the general manager in Grand Junction, called me up to Grand Junction. I thought, gee, he's going to accept this. Oh! He gave me the darnedest bawling out. "You're wasting our time," he said. "You're telling us that you can produce that cheaper than you can produce your regular ore? That's ridiculous. Now get out of here and quit bothering us." He was really very--just in those words-

very abrupt and ungentlemanly. He was real mad, or he put on a mad act anyway.

So I went back and I started ferreting around to find out who in the AEC had done the various investigations on it, to find out what their objections were and see if we could accommodate them. In the meantime, we were mining it. We had signed the deal with Stella and we had started to mine it. I figured we had to get up to several hundred tons a day. But if we got production up high enough, our mining costs would be low enough that added to this incremental milling cost we could make money under the price that they had given us.

Well, it took about six or eight months. In the meantime, Don Delicate, who was our mine superintendent from the beginning, had left to go back to Lead and become mine superintendent up there. I had been a little worried about who would take his place. He told me Gordon McMillan, who had been his chief mine foreman, was qualified to be mine superintendent and could handle everything. I was a little dubious about that but I didn't have much choice, so we gave the job to Gordon.

As time developed I found that Gordon was a very faithful and a very hard worker and knew mining pretty well, but didn't know much about the business end of things and wasn't a fast actor; he didn't really react fast when he needed to. I had a terrible time getting him to get the tonnage up. I knew it could be done; he knew it could be done; we put the men on it. So finally to get it done I just called him up every morning. "How many tons did you get out yesterday, Gordon?" "How many tons did you get out yesterday, Gordon?" I called him every work day until he got production up to where it was the tonnage we needed.

One of the things that aided us a great deal was that it had been mined, as I said before, by Entrada Corporation and C.T., and we found that they had left hundreds of tons of broken low-grade ore that they couldn't afford to ship. All we had to do was to load it and hoist it out of the mine. We had no drilling or breaking costs on this already broken ore, which was a real break. Anyway, we went for two or three months at the full tonnage. We kept meticulous records on these costs, and we wrote up a new proposal to the AEC and sent it up to Jones to review again. By then, of course, we had chewed up maybe a third of the allocation, which was too bad. But they looked at it again and finally they sent all kinds of guys down to look into it. They sent an old fraternity brother of mine, Tom Young, whom I had known at Stanford and who was working for the AEC. He came down and looked at it and kind of shook his head. I had run into Tom other times during the

AEC days. I don't know what he reported. Then they sent two or three others of their staff down to look it all over.

Then they engaged a couple of consultants, Jack Still and Rodgers Peale. Rodgers Peale had been the geologist at Tayoltita from whom I learned to do underground geological mapping. Jack Still was a consulting mining engineer in Arizona, whom I didn't know. They sent the two of them down to see what it was. I tried to explain the concept of incremental cost to them, but they couldn't see it. I thought, gee, you know, Rodgers Peale--I can handle him. But no, Rodg couldn't see it. So they went back and made a report that it couldn't be done. But we actually had the costs. They sent some auditors down, and they audited our costs, and found out that they were low enough and we were making money on this. The problem was we were mining it so fast we were using up the allocation.

Finally one day when I was on vacation up in South Dakota at Lee's parents' home, a call came through from Alan Jones. He said, "Well, you've got us convinced. We're going to consolidate the allocations. It will take a while to do the paperwork, but I'm telling you now by phone, if you want to cease mining there, you can. You've made your point." So I called right back to Grants and had them stop mining on the northwest corner of 11. It took us two or three months to work out the consolidation document, but we consolidated somewhere around a million pounds. That meant a lot of money. That was several million dollars to the partnership, because of the fact that we could substitute higher-grade ore. The average ore that we produced from Stella's property was about eight hundredths percent U3O8. And the average partnership ore was around twenty hundredths percent. This made a big difference in the financial return. That was a very satisfactory ending, especially after having been told to get out of the office and not waste their time with this foolishness.

Chall: You were very persistent when you were sure you were right, weren't you?

Swent: Yes. [Chuckles] Sometimes I wasn't right! Sometimes I'm not right. I'm persistent, but try not to be a nuisance over lost causes.

We didn't get the AEC convinced in this matter until after we had signed the 1970 stretch-out contract. When AEC decided to let us consolidate the Dysart allocation, we decided to stretch some of it out into 1968 and 1970. This meant signing a new contract with the AEC, which we did in January of 1966. The new total amount stretched out to 1967-68 was 4,241,317 pounds of U3O8 at an annual rate of 2,120,658 pounds.

Swent Appointed Vice President of Homestake, 1962

Chall: In 1962, what was the meaning at that time of your appointment as a vice president of Homestake?

Swent: Well, that meant several things. One of the reasons it was done is that this was about the time we'd gone through the reorganization of the partnership. I'm not sure whether Sabre-Pinon had merged with United Nuclear, but it was around that time. Anyway, they had named Bill Buchecker--Bill had been their chief mining man in charge of mining at the two Blackjack mines--they had named him the vice president. And I had to deal with him all the time, so John Gustafson reasoned that I ought to have a similar title to be able to face him. It also gave me an additional power to sign corporate checks that I didn't have before, and to sign corporate documents that before I had had to send to San Francisco to have signed, and that sort of thing.

Chall: It was an official title. It didn't put you on the board of directors.

Swent: No.

Chall: Did it give you a raise in pay?

Swent: No.

Chall: What was the way that Homestake provided salaries to people in your position over a period of time?

Swent: Well, I was on a Homestake payroll. Most everybody else in the partnership was on a partnership payroll, and they were handled completely different than I was. I administered all the salaries below me there in Grants, and mine was handled out of San Francisco. At that time they didn't have a formal salary review program in San Francisco. They just usually came out with an annual increase or something of that nature. They didn't cut my salary back at the time of the lawsuit when they separated things; they left it the same. I thought they might say, you don't have as much responsibility now, so we'll cut it, but they didn't. That worked out all right. But there was no particular salary review program, any formal one. They later adopted one. And I think John Gustafson really started to bring in some of those things.

John Gustafson Introduces Revisions in Administrative Procedures

Swent: One of the things that John Gustafson did introduce was a budgeting program whereby each year each operation submitted a budget plan for the following year which included all the details of the grade of ore you intended to produce, where you were going to produce it from, and what the costs would be. In the uranium business, of course, we didn't have any problem with the price. We knew what the price would be. The gold people would have trouble with that; they had to guess what the gold price would be, and the lead people had to guess the lead price. We called it a budget. It was a complete projection of what your next year's operation would be.

This was to be submitted in November, and then we would have a managers' meeting where all the managers came to San Francisco and discussed these projections in detail, and had to defend them. Everybody from the other operations could ask questions and that sort of thing. Then you also put in requests at the same time for any capital additions that you wanted to make or unusual expenditures. If they were over $10,000 they had to go to the board for approval; if they were under $10,000 the president could approve them.

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The Lead budget was usually the first one to be discussed, because that was the oldest operation. Then after that the Homestake-Sapin Partners, and then after that what other ones there were.

The Results of a Management Study in Grants

Swent: I learned through this process, somewhere around 1964 I guess, that in Lead they had brought in a company named Middle West Company, which was really a management consulting company that grew out of consulting to utilities. They had come into Lead with the assigned job of reviewing the operation of the surface departments, and had made some very good suggestions and specific savings in manpower. They were very pleased with them in Lead. I figured that sooner or later we would be asked to do the same thing in Grants. I decided the best thing from a strategic point of view would be to ask for it rather than have it thrust down our throat.

So I suggested that they do the normal preliminary study. Their method of operation was to send somebody out to review a

particular operation, and they would spent two or three days there looking over the operation and then make a recommendation as to whether they thought they could do you any good. That's the come on; they always said they could do you some good.

Anyway, I asked for this initial survey, so they did that in 1965. They sent a fellow named Stevenson down from Chicago. They were headquartered in Chicago. Then he turned in a preliminary survey saying, yes, they thought it was worthwhile doing some additional work for us. He sent a fellow named George Frank down, who stayed for about a week, and also a fellow named Herb Wagner. Then they began to get into detail and they moved things around. Frank was really the moving figure here, a very forceful, dynamic, large individual. He left Herb Wagner there for many weeks--I don't remember just quite how long--and he went back to Chicago. Came back for a short visit or two. Wagner was to work out all the details of whatever they were going to recommend.

Finally the time came when George Frank was to come down and meet with Wagner and come up with a plan that they would present to us. I met with Wagner once a week anyway, just to keep up with what was going on and what he was doing and this sort of thing. He told me that he really didn't have anything to recommend. Anyway, George Frank arrived one evening and they met in the hotel that night. From what Wagner later told me they just had a terrible argument. Frank said, in essence, "We can't say that we have nothing to recommend." That was totally against their principles. "We have to come up with a plan." So they cobbled up a plan there in the motel that night and brought it out. And it had a little merit but not a great deal.

They presented it to us the next day, and we went through the motions of listening to it. I was a little surprised, because I had not expected this from what Wagner had told me the day before. It had to do with the reorganization of our shop procedures, improving our work order system and this sort of thing. We already had a work order system. Lead had not had a work order system. This is what they had instituted up there. But we already had one.

At any rate, this was just a big fiasco. They didn't do much.

Chall: It sounds good for your ego.

Swent: Yes, but it took a lot of time and money, though.

Chall: What were they doing? I mean, how does a company like this go about doing its research to come up with a plan?

Swent: Well, they look at how you've organized the work, what individuals do, then observe how they fill their time, then decide whether there's a better method of organization for that work. And they do a lot of detailed observation. As I say, Herb Wagner was there for weeks. He would go out and spend all day long in the machine shop, just watching what different people did and what jobs they were working on.

Some machine shops, and repair shops, particularly--this is their forte, that is, Middle West Company's forte is the maintenance work. Their big thing is to recommend that you have what they call a dispatcher. All work orders go to the dispatcher and he decides how long they'll take to do--he has to have some knowledge of the business--and what priority they will get. And he assigns them out and then you keep records on the status of each work order: how many work orders are completed and the difference between the estimated time and the actual time and all this sort of thing. A lot of shops don't do this. They just jump around. Somebody can say, "Hey, this is an important job. Drop what you're doing, do this," and that sort of thing. Pretty soon it gets disorganized and then people are loafing between jobs.

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So John's budgeting program--to go back a bit--introduced a little formality into the whole procedure that had never existed before. Before then we were just operating the mine from hand to mouth, so to speak. There was very little in the way of planning other than planning our development work so we would have enough workings available.

Chall: I see. Well, that's quite a change then, particularly in an old company.

Swent: Homestake had been a one-mine operation for, gee, a good seventy-five or eighty years.

Chall: In Lead, yes.

Swent: Then it had been basically a single-man operation--the manager was everything up there--until the early 1950s when they did begin to diversify. Finally, in '57 they pulled Ab Shoemaker in from Lead to San Francisco. But Ab didn't believe in the budget way of operating either, so he didn't require it. Basically it didn't work very well until he retired. He did retire--I forget what year he retired. But the budgeting was a good idea, basically.

Chall: You haven't told me where Gustafson came from.

Swent: He came from Hanna Mining Company. They're a big iron ore mining company based in Cleveland. He had been their vice president of exploration. And I think what happened to him--from what John said at later dates--was that he was on a big stock option plan there. Sometimes these stock option plans come to the point where you're better off to quit than to try to contend with them. These stock options are exercisable at any time, but you're an insider. If you're an employee you're still an insider. And the selling of the stock is always a problem when you're an insider, particularly if you're in charge of exploration, because you're not supposed to sell the stock if you know anything that's pertinent that the outside public doesn't know.

Chall: How can you help that?

Swent: When you're in charge of exploration or something like this, you have no way of selling it. So when John thought that the Hanna price probably had peaked, and that he wouldn't be able to sell the stock that he had for being an insider, he quit. The minute you quit you're no longer an insider, and he sold most of his stock and made quite a bit of money on it and then came to Homestake.

Actually, one of the things John instituted was the Homestake stock option plan for employees. This came a little later, maybe in '66 or '67.

The Standard Practice Procedures Manual

Swent: One of the things that I started to do with John-- I'd been very impressed in Lead by a manual that I found up there called the standard practice procedures, which had been done by an accountant, so it was heavily oriented to accounting matters. It contained all standard procedures on how everything was to be charged and how all the accounting was to be done. But it also set out standard procedures and policies on pay rates and overtime and how overtime was to be calculated and minimum call-out time (time to be paid when an hourly pay employee is called out at an unscheduled time), specifying a lot of things that normally would be in a collective labor agreement. But since we didn't have such an agreement, why, they had to be spelled out somewhere.

So when I went to Grants I followed the same thing, and I set up a similar manual there. Of course, with the AEC contract we had a non-discrimination clause. So I decided I'd better have a non-discrimination policy in writing, and we developed one there. The more I reflected on this the more I thought, well, you know, the

corporation really should have one, too. So I suggested this to John. He asked me to draft one and I did submit a draft for a corporate non-discrimination clause. They adopted it and then pretty soon they began adopting some of the other policies.

They adopted a travel expense policy and a whole bunch of them. Now it's gotten very strong. In later years I added the environmental policy and then added one for health and safety. This was under Harry Conger. But I feel that I was the one that gave impetus to starting the standard practice policies back in the early sixties, that Homestake as a corporation did not have before. Actually, the home office had never really faced up to all the responsibilities that a home office really has these days.

Chall: So in a sense then it was actually up to each manager to develop his own area.

Swent: Yes.

Chall: And if you had a good manager it worked well. If you didn't, I guess you got into trouble.

Swent: Well, to develop these was a lot of work. We had lots of staff meetings. I got everybody involved in developing them and wording them. We would print them up and hand them around and circulate them and try to find any flaws in them. It would take weeks before we adopted one. Then we'd print it up and circulate it. I established a system whereby every supervisor had a loose-leaf notebook in which these policies could go. There weren't so many that he couldn't refer to them once in a while.

Chall: That was worthwhile.

Part E Mine Safety

Establishing Federal Mine Safety Regulations, 1960-1977

Chall: Well, let's see. We were going to talk about mining regulations and safety, mines inspection, and the Department of the Interior. Did you want to talk about that later, when we get you into San Francisco?

Swent: Well, I think we can start it now. It was something that's continued. It started when I was in Grants, so we could start it in the Grants experience and continue it.

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Actually on safety, this rewriting the safety booklet when I first went to Lead, turned out to be an exceedingly valuable experience. It had made me very safety conscious, much more than I had ever been before, and prepared me for the start-up in Grants and for organizing operations down there, at least the safety part of it. In Lead we were members of the National Safety Council, which has a mining section in it, and also of a group called the Lake Superior Safety Council, which basically was started by the iron ore companies in the Lake Superior area. But they had other mines in it, and they had an annual convention. It was sort of a localized safety council, not a national one.

When we had the bad experience in the industry in New Mexico, in the Ambrosia Lake area in 1959, '60, and '61, I did try something to help the whole industry out. We didn't have the safety problem, as I mentioned before, but there certainly was one in the district. So I got the different companies together and had them agree to form what we called the Uranium Operators Safety Council, which was an idea I got from the Lake Superior Safety Council. The idea of it was to have people from the different companies meet monthly and exchange conversations on safety problems, and also to pool our statistics so that we had some district statistics instead of a bunch of individual company statistics.

Chall: The companies were willing to do that?

Swent: Yes. Well, they were all desperate; they were willing to do anything. So the council got going, and one of the very first things we did--and Dick Stoehr was really the guy who spearheaded this--was have several long meetings, and not only just of safety people, but the mine superintendents and managers. They went over each and every fatality that had occurred in the district and analyzed it in detail to see what could be learned out of it. Out of that came some understanding of the ground support problems that the district had. Dick Stoehr did a very good job on that.

As a result of the work on this Uranium Operators Safety Council and the keeping of these joint statistics, in 1960 I was asked by the Mining Congress to go to Washington and testify before a congressional committee on our experience in mine safety in the Ambrosia Lake area, and particularly how the organization of this

council and the voluntary actions of the companies had turned the situation around, and how it was improving.

The question before the Congress was a move to establish a federal non-metallic and metallic mine safety act for inspection and enforcement of regulations and this sort of thing. At that time there was no such legislation in effect. There was for coal mining; coal mining had been under this since 1952. The Bureau of Mines was the agency to inspect and enforce and to issue regulations under that act.

In 1956 there had been hearings on a proposal for metal and non-metal mines and extensive hearings, but they didn't reach any conclusion. In 1960 the same thing happened and they didn't reach any conclusion. Nothing happened that year. In 1961 there was more action on the subject. This was something that was pushed by the labor unions, organized labor, particularly the United Mine Workers and the United Steel Workers.

Chall: Is that because they were concerned with the safety of their workers?

Swent: That's what they said. It has been my experience overall that basically it's a way of getting around collective bargaining. They're seeking to get advantages or get points that they hadn't been able to get through collective bargaining.

Chall: That would be health benefits and things like that?

Swent: Well, there are all kinds of things involved. For instance, no man could work alone. You'd have to have two men working together at all times. Many, many things of that nature, and limitations on overtime and all sorts of things that really are not directly safety but which they couldn't get through bargaining.

At any rate, they were pushing this. So Congress passed a law which was known as Public Law 87-300 in September of '61. This called for a two-year study of metal and non-metal mines. It had several objectives. [reads from copy of the law] One was to study the causes of injuries and health hazards, the other was to study the relative effectiveness of voluntary versus mandatory reporting of accident statistics. A third one was the study of the relative contribution to safety of inspection programs which would include a right of entry for the inspection agency, that is the right to enter your mine, versus the right of entry plus an enforcement capability. Another feature was to study the effectiveness of health and safety education and training, which there's never been any real question about. It is effective. Also the magnitude of effort and the cost that all of these things would have if adopted

Homestake-Sapin Is Awarded National Safety Honor For Accident Prevention

Presentation To Be Made Here Wednesday

The National Safety Council announced today that Homestake-Sapin Partners, located at Grants, is to be presented the council's 1961 Award of Honor for its outstanding safety record. The award will be presented at a celebration dinner to be held in Grants on Wednesday, at which time representatives of the U.S. Bureau of Mines, New Mexico mine inspector's office, state mine safety advisory board, and the governor's office will be among the honored guests.

The award is presented only where an establishment's record satisfied rigid requirements laid down in the council's award plan for recognizing good industrial safety records.

Howard Pyle, president of the National Safety Council, in a letter of congratulations to Langan W. Swent, manager of Homestake-Sapin Partners, explained that the uranium mining and milling firm qualified for the award because of its low injury rates in 1961. Its injury frequency rate was 77 per cent better than its "par" rate, and its injury severity was 98 per cent better. "Par" rates are computed by the National Safety Council from Homestake-Sapin Partners' experience in other years and from the rates of the country's mining industry as a whole.

As an example of the difficulty in winning the Award of Honor, less than 1 percent of mining units in this country received the award in 1960. (The 1961 country-wide results are not yet fully compiled.)

About 70 persons are expected to be present at the Grants Cafe for the presentation of the National Safety Council award, to be made by Howard Bird, head of the Denver health and safety activity office of the U.S. Bureau of Mines.

Governor Edwin L. Mechem has been invited to be present as well as A. J. Thompson, chairman of the state mining safety advisory board and William H. Hays, state mine inspector.

Discussing the award, Langan Swent, manager of Homestake-Sapin Partners, pointed out that the award "brings credit not only to the firm but also to the many individuals involved;" to the New Mexico mine inspector, to the U.S. Bureau of Mines, and to New Mexico in general.

The Award of Honor has not been awarded to any other New Mexico industry or firm in many years. The recent Award of Merit given by the National Safety Council recently to the U.S. Borax and Chemical Co. in Carlsbad is said to be slightly lower in rank than the Award of Honor."

by law, and to study the scope and adequacy of state mine safety laws that were in effect and how these were enforced.

So this study went on for two years and a rather voluminous report, two volumes, was published finally in November of 1964, I think it was. The basic recommendations that came out of it were fairly simple. [reads from copy of final report] The secretary of the interior should be authorized by law to appoint and reimburse advisory committees on which representatives of management and labor were to be included. These advisory committees were to assist him in formulation of codes designed to assure conditions and practices in the metal and non-metal mining industry that would improve health and safety, and to advise him on other matters relating to health and safety. And the secretary of the interior should be authorized after these codes had been recommended by the advisory committee to publish them as regulations. The second recommendation was that the secretary of the interior should be authorized--

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--to deal with the more serious hazards, which could be regarded as major items, and to require compliance with these codes and to have the representatives of the secretary of the interior empowered to enter the mines for the purposes of inspection and checking on health and safety practices and conditions. The third recommendation was that the secretary of the interior should be authorized to require accurate and timely employment and injury reports from operators. The fourth was that enough money be appropriated to let the secretary of the interior do the job.

Prior to this time the gathering of statistics had been on a voluntary basis by the Bureau of Mines, who mailed out questionnaires to every mining operator in the country every year. Then on the basis of those that got returned they put them together. Maybe 87 percent of the industry turned in their answers. It wasn't a hundred percent. This Public Law 87-300 study had the authority to make the return of this information mandatory. I think they came up with a figure of well into the nineties, 95, 97 percent, and they were able to achieve it a little faster. But the improvement wasn't really that significant. It didn't reveal any underlying conditions that weren't revealed by what the Bureau of Mines was already getting. It made it a little bit faster, it speeded things up by a month or so.

This study was headed up by an insurance acquaintance of Secretary of the Interior Stewart Udall. His name was Paul Boyajian. He was the chairman of the Mine Safety Study Board. I

think there were five members of this board that were appointed. Some were from industry and some from outside the industry.

Chall: Was that on the original two-year study?

Swent: Yes.

Chall: And did they ever get the advisory committees made up?

Swent: Oh yes, but not until Congress had acted on the study report and passed an act.

So Paul Boyajian came out to Grants, and spent a number of days there. He was well prepared. He was a real smoothie. He had read all the testimony and he knew who testified, what they said, and everything else. Of course, he looked me up because I had testified. He knew who I was and what I'd said, every word of it. He checked all kinds of ideas out on me, sort of bounced them off of me. And he was dedicated; you could see right from the beginning that he was going to get a law passed. That was his objective.

Chall: Was the law onerous? I mean, I know that the industry people weren't then in favor because I think you testified and wrote articles to the effect that these regulations as such weren't necessary.

Swent: Well, the big fear was that a set of federal standards wouldn't have enough flexibility in them to take into account different conditions. Different types of mines are very, very different and the conditions are terribly different. There are a lot of common hazards, too. But the industry people were very much afraid that the adoption of federal regulations would be much less flexible than the use of state regulations, and that you would have two layers of inspections, the state inspections and the federal inspections. They wanted to keep it voluntary, that is, keep more control over the safety programs themselves by not having such legislation.

In December of '63, just a month after the study was published James Boyd, who had been the director of the Bureau of Mines under Eisenhower, published an article in the Mining Congress Journal calling on industry to take some voluntary actions to improve safety.[1] (I think his article had been written before, but it just

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[1]James Boyd, Minerals and Critical Materials Management, Military and Government Administrator and Mining Executive, 1941-1987. Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1986.

took a little time to get published). He was convinced of two or three points. One was that taking on this inspection and enforcement activity would ruin the Bureau of Mines. The Bureau of Mines had basically been a research organization, one of publishing data and doing research on mining methods as well as safety problems. But they worked with the industry on this. And he had been the director of the bureau and knew what they did. He was very much afraid that putting them into the mine inspection and enforcement business would alienate them from the industry, and that their effectiveness as a research organization and the cooperation between the industry and the Bureau of Mines would disappear.

The other thing was he was convinced that basically industry could do a better job of improving safety than they could under government supervision. He felt that once the federal government law was passed that industry would sit back and say, well, it's up to the feds to do it now, we don't have to bother with it.

He had a long series of points, eight or ten points that he thought the industry should do. The first one was that the Mining Congress establish a non-coal-mine safety committee to spearhead this voluntary program. The Mining Congress did that. They started it in January of 1964. Jim Boyd was named the first chairman of it and I was named to be a member of it. I'm still on it; the committee still exists. But I'm not very active anymore.

One of the problems that the industry had was the performance of the large integrated mining companies--Homestake was not really that large, there are a lot of larger companies--versus the performance of the very small operators, the fellows that had four or five employees, weren't very well educated themselves, and were sort of practical types. Maybe they'd been miners for a mining company and learned their mining that way and then gone off and leased a mine somewhere and gone on their own, that sort of thing. Their safety records and their compliance with regulations and everything were very poor.

The major mining companies were all extremely conscientious on this. I was amazed when we began getting together on this safety committee at how conscientious they really were. I hadn't realized it. I knew that we had been conscientious in Homestake, but I didn't realize how some of the other major companies were. I had been kind of disillusioned really with the performance of the other companies in New Mexico. But when you got up to the level of the Kennecotts and the St. Joe Leads and companies of that magnitude, they certainly were very, very conscious of their obligations on safety and health and ran good programs. But the small ones didn't, and the small ones were always creating the problems.

Chall: Could you effect any voluntary change among them?

Swent: Well, it was very difficult to even get at them because there were so many of them, many, many small miners. Over the long haul I've come to the conclusion that the mining industry needed--now it didn't have to be federal, it could have been done by states--but you needed good thorough inspection and enforcement programs to get at these little guys and educate them.

The Bureau of Mines had some good training programs. Their instructors were not very inspiring. They would come around and offer to do a training program for your employees, but we used to refuse them. We would use their materials, but we thought that we had people who were more inspiring teachers than they were. They were doing it day in and day out and they got kind of bored with it, I think. But they had good points and they had very good movies and visual aids and demonstrations. At any rate, I just got very highly involved in those years.

In September 1964 the Mining Congress convention was held in Portland, Oregon. I gave a talk there on what progress had been made since we'd formed this committee, the things we had done and gotten accomplished in various states. In New Mexico we had worked very hard, particularly at getting qualifications for deputy mine inspectors legislated. Up until then there had been no qualifications at all. The mine inspector's position had been established by the constitution and he was appointed by the governor, and that was all there was to it. We did manage to get some qualifications passed through legislation and also to try to give them some tenure in their position so that it wasn't just a constant political turnover.

Chall: Each new governor could appoint his own?

Swent: Well, the governor still had that right, but we tried to give at least the deputy inspectors and the staff more permanency. Unfortunately in New Mexico the governor's term was for two years, so that meant if he wanted to turn a mine inspector out, he could. You could have a new mine inspector every two years. And this had been going on for a while. A fellow named Bill Hayes at this time became state mine inspector in New Mexico. With all the emphasis on safety that came about through the federal laws and publicity and everything, the governors more or less left him alone for several terms. I think he served until he died, about twenty years. He was a good man.

After this report came in in 1963 the Congress didn't do anything. I never was quite sure what was holding things up. There was a fellow named Harry Moffitt in the Mining Congress who

worked under the executive director, Julian Conover, as one of his assistants. And he had a very good relationship with the chairman of the labor committee under which any such bill would come. This particular chairman, I think his name was [John H.] Dent, was from Pennsylvania and had a coal mining district in his area. He actually was quite sympathetic to the industry point of view on this and kept most of these bills bottled up in his committee.

But in 1966 finally they managed to get something through. They passed the federal metal and non-metallic mine safety law. Before they did so they had hearings for it. I went out and testified for the Mining Congress on it but it didn't do any good. This act did a few things. It set up a right of entry for the U.S. Bureau of Mines and their representatives. Actually, the way it was worded was the secretary of the interior or his representatives, and then he delegated it to the Bureau of Mines. It provided for advisory committees to draft mandatory and advisory regulations, provided for periodic inspections by the representative of the secretary of the interior.

It also set up something that they called state plans, whereby if a state wanted to take on the responsibility of administering the federal program, it could enter into an agreement with the secretary of the interior to do so. They had to adopt regulations which were as stringent or more stringent than the federal ones and make certain reports, of course, to the secretary of the interior. They would be subject to some spot checking by Interior Department inspectors. They had to show that they had enough funds to carry this program through. And this was beneficial in many ways. Several states did it. I think Arizona did it, New Mexico did it, and Utah did. Maybe Colorado, I'm not quite sure.

Chall: Is there any reason why a state would want to take it over? I would think it would be costly.

Swent: Well, in a way, yes. But most of those states already had an inspection system of their own. And it really made sense to have just one inspection agency rather than two. They got tied up a little bit with the federal requirements and this sort of thing, and there wasn't any money that went with it. They didn't get any

money out of the federal government for it. But industry in general pushed for that in the various states.

Finally they had some very limited enforcement powers. They did have a right to issue an immediate cease order in case there was imminent danger, but almost all safety laws have that. Barring the imminent danger, they had very limited enforcement powers on the rest of their regulations. The law was revolutionary in many ways, but it wasn't as bad as it could have been or as it became later.

So the act was finally passed. This was the first federal act governing safety regulations and inspections for mining in metal and non-metal mines. They set up an advisory committee to generate the regulations and Jim Boyd served as the chairman of that committee. This committee then set up three subcommittees: one for regulations for open pit mines, one for regulations for underground mines, and one for sand and gravel mines. They had three industry and three labor representatives and some Bureau of Mines representatives on each one. But the Bureau of Mines people really were designed to be advisors and the industry and labor representatives were the ones who were the work horses and did the work. Well, I shouldn't say did the work. They were the ones that had the decision-making power. The Mining Congress had the right to submit names to the secretary of the interior for industry people to be named. Then the secretary would name them.

They wanted to submit my name but I declined. I was really pretty busy in those days. I thought it was going to be too time-consuming, so I declined. So Gordon Miner went on. Gordon had worked for Homestake up in Moab in the uranium mines there and had managed them for several years. I actually knew Gordon very well. In fact I had hoped that he would be the person that could come down and take my place when I left Grants. But he quit Homestake maybe a year before that and went to work for Hecla Mining Company. He did a very good job of heading up the underground advisory committee and probably a better job than I would have done. I think he was more suited for the politics that went on there.

By 1969 they had--and this is a long time; the act was passed in '66--by late '69 they had three codes worked out for the three different types of mining. A lot of it was common sense. A lot of it came from the Bureau of Mines. For years the bureau had a recommended safety code and recommended safety things for operators to follow. There were a lot of safety booklets published by different companies, including Homestake's. So they went through all of this stuff and came out with proposed regulations. But when we put them all together to look at them, there had been no coordination between the three different committees. So they had,

for instance, different wording on a regulation designed to cover the same point. That is, there would be different wording for the underground mines than for the open pit mines. The designation of which were to be mandatory and which were to be advisory was different. Some of them would be mandatory in one case and not mandatory in the other. It was apparent that they just needed to coordinate all of this. So they formed what I call the superadvisory committee by taking one person out of each of the three committees, that is, one person from each group from industry and labor. This committee had to go through and coordinate and correlate everything so that the language was the same on those that were designed to cover the same situation, so that they were standardized as far as mandatory and not mandatory and that sort of thing. The committee also had to designate which of these regulations were advisory, just as good practices, and which were mandatory. They were so labeled in the final publication.

This took quite a little while. They finished up and had a finished set of codes by very late 1968. That was when Nixon was elected. There was a big rush on in the Johnson administration then to get these published and in effect before the Johnson administration went out of office on January 20, 1969. They did manage to get them published in the federal register on January 17, 1969, but by law they had to be published thirty days before they would become effective. They didn't make that. The thirty days ran into the Nixon administration.

In the meantime the Mining Congress had changed heads, Julian Conover had retired and the new head was Allen Overton, who was a very dynamic character, very quick acting. He had been in politics in West Virginia and was very, very capable. He went immediately to the senior people in the administration, particularly the new secretary of the interior, and sort of warned him about these regulations that had been published, and that they were going to go into effect in a few days if they didn't do something right away to suspend them, and to look them over and see if they were satisfied with them. So the administration did suspend the regulations until they'd had a chance to review them. Then they eventually became effective. There were some changes made, I think, minor changes. But they eventually became effective in September of '69.

The law put things in the hands of the Department of the Interior, and the Department of the Interior put it into the Bureau of Mines to do the work.

Safety Inspection and Enforcement

[Date of Interview: February 12, 1988] ##

Chall: Who was charged with enforcement?

Swent: Actually, there wasn't a great deal of enforcement involved in the act. It was certainly not like the present-day act or like the Coal Act. It's a long time ago now, but the inspectors could inspect. They would write a report citing whatever advisory and mandatory standards they found were not being observed. Then they could issue an order ordering the operator to comply with these particular regulations, particularly the mandatory ones. And finally, if the operator refused to do it and there was another inspection performed and they were not being complied with, why, I think there were only two things the inspection agency could do. One was, they could issue a $3,000 fine, and secondly, if it were something that caused imminent danger, then they could close the mine or the area that was in imminent danger and make the operator pull all the people out of there. But these penalties were very far down the road, and until you got to that point there were really no penalties involved. It was not too serious enforcement, really. The enforcement relied mostly on good faith on the part of the operators to just not want to get a bad reputation.

Chall: As a result of the 1969 regulations was the Bureau of Mines enlarged?

Swent: Oh yes, they had a terrible time building up enough manpower to do the inspections. They established a mine inspection academy in Beckley, West Virginia, in Senator [Robert] Byrd's state. He was chiefly responsible for its location there. Of course, that's a coal mining area. What they did was to steal people from industry, and then they began hiring shift bosses and miners and sending them to this academy and training them for a few months and then sending them out to do inspections. It got to be quite a problem having employees inspecting the mine where they had been working. This was particularly a problem in Lead, in South Dakota. And it remained a problem for many years.

Chall: Is there some background for the persons who were going to be inspectors? Did they have to have had some mining experience?

Swent: Yes, there was a certain amount of experience required. They had to have practical experience as well as a high school education. The educational requirements were not high; it was more knowing mining and being able to know the regulations. For a miner, and

even for shift bosses, they paid a very good salary. And of course, they had all the government benefits.

Chall: How are the relationships between the mining people and these inspectors over the years? I mean, you've been seeing this for many years now, I guess.

Swent: Yes. Well, it's a function of the inspector, and it's a personality thing the whole way through, generally. Some inspectors get along very well with everybody; some don't. Some inspectors get along pretty well with most people but don't get along with some. It just depends on the personalities of the people that they're dealing with. Generally speaking, the bureau inspectors had inspection duties even before this act, but they were sort of advisory, and they were welcomed to a certain extent. But later, with the advent of the 1966 act, things became a little more adversarial. They were regarded as people who could cause you trouble. Then with the 1977 act, when that was changed and there was a much more stringent program adopted--

The Federal Mine Safety Act Is Strengthened, 1977

Chall: What was that? What made the change?

Swent: Well, they did away with the 1966 act and just extended the Coal Act by going through it and changing the words "coal mine" to "coal and other mine" so it applied to all mines, and brought in a system with a requirement of four inspections a year and a series of penalties. Citations were issued for each violation and financial penalties were set on each citation. You could take these to hearings and this sort of thing, contest them if you wanted to. This resulted in a much more adversarial attitude.

But a big change occurred in 1972. In May, 1972, there was a very serious mine fire in the Sunshine Mine and ninety-two people were killed.

Chall: What kind of mine was this?

Swent: It was a silver mine in Idaho. This began a push by the United Steelworkers of America to get the mine safety enforcement function transferred out of the Department of the Interior and into the Department of Labor. This change was strongly opposed by industry at the time. Of course, the Department of the Interior didn't want to lose the jurisdiction either. So in order to rectify that and try to avoid it, the Department of the Interior set up a separate

agency within the department. They took the inspection function away from the Bureau of Mines and put it into an agency called the Mining Enforcement and Safety Administration. The acronym was MESA, and it was called MESA [pronounces "may-sa"]. Actually all it was was a paper transfer. All the same people were there, they just transferred the Bureau of Mines people that were on this into MESA.

Chall: It wasn't any different? Except the rules were different.

Swent: Well, the rules were the same. This was done in 1972. As a result of the mine fire they did recommend and adopt some, oh, half a dozen specific regulations, the principal one of which was that every man had to have what we call a personal self-rescuer, and carry it on him. This is an additional thing to hang on a man. It's about eight or nine inches long and three or four inches thick, and about four inches wide. It has to be generally hung on the belt, which also carries the lamp battery. If he has any tools, like wrenches or small tools, they're generally hung on the belt, too, so it adds to the bulk. The self-rescuer is a device which absorbs carbon monoxide, and in case of a fire and smoke you pull it out. It has a nose clip and a device that fits over your mouth and a rubber strap that goes on over your head to keep it on. Then below that there hangs a little container that has a chemical in it which absorbs carbon monoxide. The air that you breathe comes through this, so the carbon monoxide is removed and you get CO-free air.

Chall: For how long?

Swent: It's good for about thirty to forty-five minutes, which is generally long enough to find your way out of a tight situation. What had happened at the Sunshine Mine was that many people didn't have them. Although the Bureau of Mines regulations specified that they be available, the men apparently didn't know where they were or that they needed them and so they didn't have them. They died, apparently, of carbon monoxide poisoning, but some experts believe they encountered even more toxic fumes from the burning of plastic foam bulkheads. The self-rescuers would not have been effective against these fumes. I got fairly familiar with that because right next door to the Sunshine Mine was the Hecla Mining Company. Hecla, in fact, had a 20 percent interest in the Sunshine Mines. And Gordon Miner, who was working for Hecla at that time, had worked for Homestake for a number of years down in Moab, in charge of the operations down there. As I told you, Gordon and I have been good friends for many years. He was on the scene and went immediately and started helping with the rescue work at the Sunshine Mine, and was able to at least piece together what had happened pretty early, long before any official reports came out.

At a meeting of the American Mining Congress Non-Coal Mining Safety Committee in Detroit a few weeks after the fire, Gordon gave a long and detailed report on the fire, its causes, and the rescue efforts.

Chall: So that made some--well, it made a change in the bureaucracy and enforcement personnel, but that was about all that came about in 1972?

Swent: Yes.

Chall: So what prompted 1977?

Swent: There was no particular metal mine incident. There was a coal mine incident. Of course, there's a big difference between metal mine safety or non-metal mine safety and coal mine safety. Coal mines have the potential for disaster because of methane. If the methane explodes it's throughout the atmosphere, and it generally involves many people. Accidents in metal and non-metal mines are of a different nature. They're generally having something to do with equipment or fall-of-ground, and involve maybe one person, sometimes two, exceptionally three. So that's why traditionally they'd always been kept separate and under separate laws. There was, I think, a bad coal mine fire and explosion that eventually led to the 1977 act. The 1977 act accomplished what the Steelworkers wanted, and that was to move it all over into the Department of Labor.

Chall: Oh really? All the inspection?

Swent: All the inspection.

Chall: For all the metal mines?

Swent: Yes. Both coal and metal and non-metal mines. The 1977 act simply changed the words "coal mines" in the Coal Mine Act to "coal and other mines" so that all mines were covered by the Coal Act. The 1966 Federal Metal and Non-Metal Mine Act was repealed. But the regulations are still separate and different.

Chall: So the Bureau of Mines has no inspection?

Swent: No, not any longer.

Chall: I see.

Swent: Many of the people were just moved again; the same people, the same cast of characters.

Chall: What's the function now of the Bureau of Mines?

Swent: It's a research agency.

Chall: Since you were primarily concerned, I think, with uranium mining, what effect did all of these changes in bureau management have on the kind of work that you were concerned with? By this time, of course, you were in the central office, headquarters, I think you call it.

Swent: Well, all these things have a cost. The thing we had to do was to try to be sure that the regulations when finally adopted were practical, could be enforced, had a reasonable objective, and weren't exceedingly expensive in view of the objective.

Chall: Could there be regulations sort of across the board, that could include coal, silver, gold, uranium mines, or would they have to be self-set?

Swent: Well, there were none that covered coal and other mines. In metal mining there were a few, but most things you couldn't do across the board, or you couldn't do by metals. That is, you can't say you do this in gold mining and you do that in silver mining, because most of the metal mining is similar regardless of what the metal is, and sometimes an ore is mined for several metals. More important to the safety elements are the type of rock that the metal occurs in, and whether it's been broken up, or faulted, whether it will stand well by itself, or whether it's incompetent and that sort of thing. It's really the type and condition of the rock, and not the type of metal that you're mining that is important.

Health and Safety Factors in the Mining Industry

Chall: Well, when if ever was there concern for this whole problem in the uranium mines of what you call radon daughters, or that kind of thing, the gasses, is that another kind of safety?

Swent: Well, that's a health matter. The two go hand-in-hand, although the law as originally passed was more concerned with safety than with occupational health. But concern for radon daughters began very early. As I recall I first heard about it in 1955. That's a whole long study or chapter and I'd kind of like to go into that at another time.

Chall: That's all right. I'm just trying to separate all these regulations. What about the American Conference of Governmental

Industrial Hygienists, ACGIH? Did that come in later? Is that a part of this whole concern about mining?

Swent: Well, it's industrial, it's not just mining. It's used in mining, or their results are used in mining. But it's a quasi-governmental organization, sort of a scientific organization. They study various contaminants to which industrial workers may be exposed on the job, like silica dust and various fumes and dusts. Then they set levels which they think, if observed, on the average are safe. Their results are reviewed annually. If any changes or new standards are adopted, a year or more of notice is given. Their preface each year states that their limits shall not be used to establish sharp lines between safe and dangerous conditions. Most inspectors try to do this anyway. These are sometimes adopted into regulations, but they are developed separately from the regulations.

Chall: And this is within the Department of the Interior?

Swent: No.

Chall: Oh. Where is that?

Swent: Well, it's a professional society of industrial hygienists in government agencies and educational institutions which have occupational safety and health programs. It also has members from outside the U.S. It doesn't belong to any of the federal agencies. It's sort of quasi-governmental.

Chall: But it's a non-governmental--

Swent: Sort of a voluntary organization.

Chall: Who appoints these people?

Swent: I'm not sure. If qualified by job and training, I think individuals can apply for membership, but I really have never gone into that.

Chall: You've never been a part of it?

Swent: No.

Chall: Now as long as we're talking about some standards set up in the 1970s--there was something set up, I think some time in the 1970s, called UMTRAP, the Uranium Mills Tailings Remedial Action Program.

Swent: UMTRLA, we call it. Uranium Mill Tailings Recovery and Conservation Act.

Chall: Oh. It's Recovery and Conservation Act?

Swent: That's right.

Chall: I see. I've got it here [in notes] as Remedial Action Program.

Swent: Well, that program comes under the act, yes.

Chall: It was placed in the Department of Energy, which is a department that was set up later; I don't even know when the Department of Energy was set up. [August 4, 1977]

Swent: Yes, I've forgotten when now, but the Department of Energy, when it was formed, took over the functions of ERDA (the Energy Research and Development Administration) which had earlier inherited the non-licensing and non-inspection functions of the Atomic Energy Commission.

Chall: However, what about it? How much did that affect what you were concerned with?

Swent: Oh, it has had a tremendous effect. This was the first act to get into the mill tailings situation.[1]

Chall: Well, let's see, I may have sidetracked you there from your own notes. Do you want to go back to what you had?

Part F The Move from Grants to Homestake Headquarters in San Francisco, 1966

The Transitional Period in Grants

Swent: Well, I was going to go back to Grants and the transition, getting out of Grants and moving to San Francisco.

Chall: That's fine.

Swent: In 1963, I think it was, Don Delicate, who had been mine superintendent for me, was moved. Ab Shoemaker wanted him to go to Lead and become the mine superintendent up there. He did that, and

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[1]Mill tailings discussed fully in Chapter IX, pages 659-668.

eventually he got to be assistant manager. Finally somewhere in the 1970s he was made general manager, when Jim Harder retired.

At any rate, when this came up I asked Don who should take his place as mine superintendent. His general mine foreman was Gordon McMillan. He said that Gordon was capable of becoming a mine superintendent and could do the job. So I said fine. Don left and I soon found that Gordon really wasn't anywhere near as good as Don. He had the technical capabilities, but not the management capabilities. There comes a time in someone's life--at least in mining engineering, and I think probably it's true in any line of work--when you're working your way up the ladder and learning at the production levels you deal with a lot of technicalities. You learn how to handle them and they keep you very busy, and this is all you know, all you have to know to do your job.

When you start getting up into supervisory management areas, then all of a sudden you get a lot of additional requirements that not all people can meet. You suddenly begin to see how all of this fits into running a business. You get involved with the taxation problem, you get involved with lots of legal problems. And I don't mean just contracts, but the Wage and Hour Act and the labor laws, all this sort of thing. Taxation in particular with the depletion allowance for mining and how that affects the economics. Some people can't make this transition. They like to stay with their tried and true technical capabilities.

At any rate, Gordon wasn't really able to make the transition. Now, many people get to that stage and they don't have the knowledge, but they go out and get it. Others don't. And Gordon didn't seem to be able to get it. So later, in 1965, when John Gustafson began to talk to me about my moving to San Francisco, I had to tell him that I didn't think Gordon McMillan was qualified to take my place. And secondly, that the United Nuclear people had told me that they wouldn't agree to his being manager either. So John said, "Well, you have to go get somebody who can take your place." I wasn't really too anxious to move to San Francisco anyway, as I was very happy at that time in Grants. So I didn't rush this particularly.

Then one day John Gustafson received a resume from Milt [Milton H.] Ward, who was the assistant manager at Kerr-McGee in Ambrosia Lake, working under Jack Robinson. Jack had taken Marion Bolton's place when Marion Bolton had been moved to the headquarters in Oklahoma City. I knew Milt Ward, so I went out and talked to him, using this resume as an indication that he was interested in making a change. He said, yes, he was. Milt was a very ambitious person and quite capable. So we had some preliminary talks, and he was interested. As I said, I wasn't in

any rush anyway. Before we could come to any final conclusion, however, he was transferred to Oklahoma City by Kerr-McGee.

Chall: Excuse me, but whatever did you do with Gordon McMillan when you found out that he wasn't going to be well-placed as superintendent there, even before they thought of moving him into your slot?

Swent: Well, he was able to learn a little more and carry on the mine superintendent's job. But that was about, I figured, as far as he could go.

Chall: I see. So we're still looking for a replacement for you now.

Swent: Yes. So anyway, I kept in touch with Milt Ward in Oklahoma City. Finally we came to an arrangement where we hired him. The understanding was that he would come to Grants and he would have six months trial, with an overlap with me. If it was satisfactory, why then I would move to San Francisco and he would take over as manager. He would come in as assistant manager.

See, Don Delicate had had the title of mine superintendent and assistant manager. Don always acted as my assistant when I was gone. When Don left I did not give that title to Gordon McMillan, and this was a little bit awkward there for a while.

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I had tried very hard to bring Gordon along, but it was just too many years, probably of what I call the technical work. He couldn't really seem to get himself above it. I told him alone and in person that we were bringing Milt Ward in as assistant manager. Then later we announced it in a staff meeting, and then I made a press release and announced it in the newspapers.

One of the most unexpected and yet dramatic effects of all this--and this sort of illustrates the closeness of life in these small towns, particularly in a small community where there are just a few employers--was the effect on Olivia McMillan, his wife. Gordon took it quite well, but Olivia didn't. She had apparently counted on his getting this job. She fell apart psychologically, just terribly, and became very vicious to us. She threatened to kill Lee and to kill our children. We were warned by two of her doctors to stay out of her sight and not go near her, to keep our doors locked. We lived there, but the last six months were just terrible because of this.

Chall: And nothing was done for her?

Swent: Well, yes. It took a long time, and it wasn't cleared up by the time we left, but she eventually did get some psychiatric help. Olivia normally was a lovely woman. She had a very gentle nature and was a lovely person. We had always liked her very much. This was just a terrible about-face. If she would see us in public or something she would just be horrible to us, make all sorts of cutting, really direct, biting remarks. And say things like, she had seen us doing this and she had seen us doing that, which were obviously not true and showed that she had some sort of a mental problem. Anyway, she finally got mental attention, and after several years it has blown over and we're back to our old relationships. When we go to Grants--last time we were there, just two months ago, in December, she had a big dinner for us there and had about fourteen or fifteen people.

Chall: Is that right? Well, I'm glad to know that.

Swent: But it was really terrible during the last six months we were there, and even for a period after that.

One of the effects of Olivia's problem was that we decided not to make a big issue about our leaving. We kept it very quiet, although it was pretty well known. It was obvious that Milt was over-qualified to be assistant manager. But we didn't let anybody know when we were leaving. In essence we tried to leave very surreptitiously, without a bunch of farewell parties or celebrations, that sort of thing, in order to just minimize the friction.

Chall: But you found that Ward was going to be an able administrator.

Swent: Yes. Oh, Milt is very capable.

Complex Negotiations with General Electric for the Sale of Uranium

Swent: During this six-months overlap we had a request from--we were getting them from all kinds of companies, but we got a particular request from the General Electric Company to bid on a sale of yellowcake to them. I responded to this for the partnership--they had sent out a request to uranium producers for bids on their uranium requirements over a number of years. I just went as far as the life of the partnership, which was at that point through 1970. I had responded to a lot of these. We were getting them also from Westinghouse and from others. We were getting them from European utilities. We never got any nibbles, so I was surprised when we got a nibble from G.E.

They sent me a letter asking us to meet in San Jose, California. So I telephoned them and said I would go. They said they wanted to be sure that somebody attended for us who could make a commitment. Well, I told John Gustafson about this and asked him if he could go, as he was president. I didn't feel that I really could make such a commitment. He told me, no, he couldn't go, and he told me to handle it.

Well, Milt Ward and I went to San Francisco a day ahead of time and spent a lot of time with John [Gustafson]. We went over the prices. One of the problems was the question of our limited partner. John had taken the position that we should do the business part of it since we were the general partner. But he decided he had better call Dick Bokum and tell him what was going on. He was going to do that the next day while I went down to G.E.

Well, I went down to G.E. in San Jose, and had a long meeting with them. The morning was dedicated primarily to their trying to find out about the background of the partnership, what our reserves were. They wanted to know if Dick Bokum knew that we were talking with them. I told them John was telling him that day. They wanted to know if he approved of it. They wanted to extend the time; I had only bid on a limited number of years, and they wanted to extend it. They wanted to extend the prices to more years. It was fairly complex, but a very thorough discussion.

At noontime when we broke for lunch I called John in San Francisco and told him where it all stood. He had not been able to get hold of Bokum yet. I told him what General Electric was doing, what they wanted, what were acceptable prices to them. He had no objections. So we went ahead in the afternoon and talked some more. Finally the G.E. people said, "All right, take this number down." They said, "This is a purchase order number. In all correspondence from now on refer to this purchase order number, and we'll write up a purchase order and send it to you." During the course of the meeting I had written out--very reluctantly, because I felt that this was going a little too far--a schedule of years. I still limited it to the partnership life, and a series of escalating prices over the years and the number of pounds per year.

Well, when we got out of the meeting and got back to John Gustafson, it turned out that Bokum had objected violently to all of this. He and John were sort of at a stalemate. I returned once to San Jose to work with the purchase agent on the wording of the purchase order. Then afterwards, as it became apparent that we weren't going to be able to go through with this because of Bokum, I just quit talking to G.E.

Chall: What were Bokum's concerns? What were his objections?

Swent: Well, he just thought that we were going too cheap and that the market would develop better. He was absolutely right.

Anyway, nothing happened for several months. After I moved to San Francisco, G.E. raised the point again and wanted to go through and sign the purchase order and issue it. By then we had decided that we couldn't do it, so we told them that. It was all reviewed in detail with our attorney, Alvin Rockwell. Anyway, they threatened a suit. John Gustafson said that I should have said that the whole thing was subject to board approval. I reminded him that they wanted someone who could make a commitment and I had asked him to go, and he had asked me to handle it and he'd said nothing about board approval.

Anyway, that was water under the bridge, but we entered into some negotiations and had a couple of meetings with G.E. They had changed some personnel by then. At one point John offered to sell them a fairly large quantity of uranium at twenty-five cents off the market price. They said, "Well, how do you arrive at that?" And John said, "Well, at so many hundred thousand pounds times twenty-five cents, it's so many hundred thousand dollars benefit in essence that you're getting out of this." Well, this was a serious negotiating mistake, because from then on, G.E. knew that Homestake was willing to pay that amount of money to settle the lawsuit. Then they just wouldn't give up. I thought we had a pretty good case. I had purposely not made any firm commitments while we were in that meeting in San Jose. But it just made them all the more eager to negotiate and press the point when they found out that John was willing to pay something on the order of $500,000 to settle it--$400,000 or $500,000, I forget what it was.

At any rate, then I began to think about this. This was now a year or so later, and the prices had begun to go up. I thought, "Why should we sell a large quantity of our reserves at a slight discount off the current price?" We were going to get stuck with the amount of settlement that John had mentioned any way we did it. So I advised John to sell them a small amount of reserves at a big discount, and that way we could keep more of our reserves and gamble that if the price went up very much we would get more than our money back by having held the reserve. He thought that was good advice, so we finally settled it that way and made two small shipments to G.E. in the 1970s, I think 250,000 pounds each. But they were at substantially lower prices than the market price at that time.

Chall: Were they going to build their nuclear plants? Is that what they wanted it for?

Swent: Well, they were selling reactors and guaranteeing a supply of uranium to the buyers of the reactors, so they wanted a supply of uranium to fulfill these requirements. Basically the utilities thought they could contract for uranium the way they could for coal--so also did the G.E.s and the Westinghouses. That is, that when they committed a reactor that was to operate for, say, thirty years, that they could go out and contract with a producer of uranium for thirty years supply.

Well, the problem is in the rate of consumption. The rate of consumption in the coal fired plants generally is tremendous. Coal seams are usually very large and the utilities can always find producers that can operate at an economic rate and contract for twenty or thirty years. In the uranium business there are very few mines that last that long. The amount that one reactor uses in a year generally is not enough to keep one moderate-sized uranium mine operating at an economic rate. To try to supply somebody for twenty years means operating for years at less than optimum rate, or else taking on several such contracts for a shorter period. So this contracting technique just didn't work in the uranium business the way it did in the coal business. There was a lot of dilly-dallying around in the early uranium contracting business as a result of that. Eventually the utilities and manufacturers went to negotiating for fixed amounts of uranium over five to ten year periods.

Digression: Ending the Partnership, 1970

Chall: I see. You mentioned a few minutes ago the fact that your partnership was going to come to an end in 1970?

Swent: Yes.

Chall: What did that mean to the business? I mean, what happens when your partnership ends?

Swent: Well, if a partnership really ends, you dissolve it and you go out of business. The assets are sold off and that sort of thing. With this partnership agreement, when John Gustafson first extended it to 1966 there was a provision in there that at the end of 1966 the partnership would end and the business would be put into a corporation, owned 25 percent by Homestake and 75 percent by Sabre-Pinon. The reason John did that was that at that point, in 1961, it was not clear when the non-governmental market would come along. The government market was certainly drying up. AEC was retiring and reducing its commitments more and more. He didn't want to be

faced with a continuing partnership with Homestake as a general partner having the obligation to finance a losing venture for an unknown number of years while the market developed. So he thought that was the way to go, to put it into a corporation. That's what the 1966 agreement provided.

Then when we extended that to 1970 with the additional stretch-out with the AEC, that provision and the whole partnership agreement were just extended. That was to become effective at the end of 1970, in 1971, in essence. We had to become a corporation.

Chall: Is that still in existence?

Swent: No. When 1970 came the partnership agreement was changed again. We had a big battle over this. Sabre-Pinon, or United Nuclear then, didn't want to go into the corporation either. We agreed to extend the partnership. But they wanted management rights, so the agreement provided that if United Nuclear didn't approve of the manager of the corporation, or the management, that they could ask for an outside manager, which they did. It fell to my lot to try to find an outside manager. They kind of apologized when they did this. Bokum was no longer president. He had finally been ousted from United Nuclear and they had a new president named Dave Shaw, who had come in. He had been a former G.E. employee up in Hanford. He brought in another G.E. henchman named Douglas Johnson.

At any rate, they said, well, according to the partnership agreement this is our last chance to request the management rights, so we're going to do it.

Chall: And was Ward in there at that time?

Swent: Yes, Milt Ward was manager.

Chall: I see. They wanted to change--

Swent: Well, they weren't dissatisfied with him; they just wanted to protect their rights. So I went around and tried to figure out how we could get somebody else to manage. I went to Kaiser Engineers and had some talks with them in Oakland, particularly with John Havard[1], to see if they would be interested in coming in and managing this, and make a serious proposal. After I outlined the situation to them they didn't show any interest in it. So we had a partnership meeting or two, and I told them [United Nuclear] that it was difficult to find anybody who was interested in managing it

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[1]John F. Havard, Mining Engineer and Executive, 1935 to 1981, Regional Oral History Office, University of California, Berkeley, 1992.

on an agency basis. They really weren't dissatisfied with our management, they just wanted to keep the issue alive. So it stayed alive for a while.

Finally, in 1981, Homestake bought United Nuclear out of the partnership. Since 1981 it has been completely owned by Homestake.

Chall: Is Ward still there?

Swent: Oh, no, no. Milt Ward left a long time ago. He was very ambitious. He stayed two or three years and then left and went with Ranchers Exploration and Development in Albuquerque. He was executive vice president for them. He was there for several years and then he went to what originally was Freeport Sulphur and now is Freeport-McMoran. He has worked up to be chief executive officer of Freeport-McMoran, which is a very, very high industry job.

Chall: What do they mine?

Swent: Well, they're in the sulfur business, they're in gold mining, they're in base metal mining, and they've been in coal mining around the world. They're a major, world-wide producer. In fact, at one point Milt told me that he was traveling so much on his foreign work that it was beginning to have an effect on his family life. He and Adele were having serious problems.

No, Milt has done exceedingly well. I just saw him a couple of weeks ago in Washington.

Chall: All right. Have you had somebody who stayed pretty well there after Ward left, or was it a come-and-go thing?

Swent: After Milt Ward, Paul Price took his place. Paul Price was the chief engineer up in Lead. He got sort of dissatisfied with something up in Lead, so he asked if he could be transferred to New Mexico. So Paul was transferred to the partnership and worked there at the mines. He got to be mine superintendent under Milt.

Leaving Grants Without Fanfare, July 1966

Swent: Let me go back a little ways and describe our move. [chuckles] When we moved, as I said, we decided not to have any announcements or any parties and celebrations or farewells. I just started quietly cleaning out my junk out of the office, little by little. Lee did the same thing in the house. We arranged for a van to come in early July and we packed up in one day, and left a couple of

sleeping bags and the beds that didn't belong to us anyway in the house. We slept there that night and left the next morning.

Chall: My word. Without any fanfare?
Swent: No fanfare.

Chall: Well, the newspaper gave you a fine editorial.

Swent: We had told a few people a few days beforehand. Most of them had guessed that this was coming sooner or later, because of having brought Milt Ward in. It was just a question of when in their minds.

At any rate, we drove. We had an old 1963 Buick station wagon, and we drove out to California and parked it in my dad's garage on Lincoln Avenue in Piedmont. He lived at 59 Lincoln. Then we took a vacation to Europe. Let's see, we didn't take everybody. We had sent Kim and Christine up to Lead to stay with Mr. and Mrs. Herz and take a brief driver education course from Wendell Handley, a very good friend of ours, of the Lead High School. We had brought the other two children with us in the car, along with the cat and the dog.

Chall: [Laughter] Even for a station wagon that's a pretty full load!

Swent: Yes. [Laughter] We rented a house. On one of my visits out here, when I was out visiting G.E., I had located a house to rent down in Piedmont. We looked several times. Lee had come out and we had looked for houses to buy, but we couldn't make up our minds and couldn't find anything we thought was just right, so we decided we'd rent for a while. Our stuff went into storage while we were traveling. We took off after a day with my dad and flew to Denver. Kim and Christine flew down from Rapid City and met us. We sent Jeannette up to Lead to stay with her grandparents. We sent Kim to Grants to work in the hospital. (He had declined to go on the trip with us.) Christine and Richard went on to Europe with us.

The Vacation in Europe, July and August ##

Swent: The tour we signed up for was a People to People tour of some "iron curtain" countries. The People to People group originally was started by Eisenhower. This was a banker's trip. I had been on the board of the First National Bank of Grants, and the New Mexico Bankers Association had signed up for one of these trips. I had signed up to go on it. But not enough people from New Mexico signed up to make it, so they said, well, you can go with the

Kansas group. So we got thrown in with the Kansas bankers. It was a very pleasant group. We didn't know anybody in it, but we made some good friends. It was a group of fifty-five people. And we added a couple of weeks to the trip ahead of time.

We went direct to Athens. This just shows you how the airlines work. We had made arrangements originally to fly TWA. Then I heard they might have a strike, so I called them up and said, "What will you do if you have a strike?" "Oh, we'll cover you. We'll get you some alternate reservations or something." I didn't trust them, so I made alternate reservations. And sure enough, the strike came and they went down. I called them up and I said, "What are the alternate arrangements that you've made for us?" "Oh, no, you're on your own. We haven't made any alternate arrangement." So it was a good thing I had made my alternate arrangements myself.

But as a result of TWA not flying, why, we had a very close connection in Chicago. We couldn't go from Denver to New York; we had to go through Chicago because of the tight scheduling situation. Apparently our baggage didn't make the connection, so our baggage didn't make it to Athens. We spent the first four days in Athens in July, in terrible heat, with no baggage. It finally caught up with us and then we had a very enjoyable trip. We went on over to Izmir in Turkey, where we visited an AFS [American Field Service] student who had stayed a few days with us in Grants. Just a few days; she hadn't been there a long period of time. Then we went up to Istanbul and we finally backtracked over to London where we met the bankers' tour group. Then we went to Brussels, and then we took off on an airplane for Moscow.

Chall: Oh, that was quite a trip!

Swent: Yes. We spent several days in Moscow. It was a very interesting trip. The problem with the Kansas bankers was that Kansas has one of these no-branch bank laws which really means that all banks are small. An eight- or ten-million-dollar bank was a big bank in Kansas under that law. So these fellows were not big-time bankers in any way, shape, or form. They were quite good, probably, at appraising crops and cattle and deciding how much to loan on them, that sort of thing. But when it came to international banking, they just had all kinds of hang-ups.

We got into discussions with the Russians in Moscow, through an interpreter. The arrangement was that, whatever country we were visiting, the officials would explain their banking system to us and then we would ask questions. Then when we were through, we would ask if they had any questions of us. The questions at this first session in Moscow--for one thing, the Russian stressed the

savings banks a great deal. People could put in their money for savings. So the bankers began asking about loans when the questions came. Somebody asked, "Well, can a man borrow money from a bank to buy a house?" "Oh, yes." "Well, what sort of interest do you charge?" "Oh, two or three percent." "Gee, that's wonderful." And then they asked, "Well, can a man borrow money to buy an automobile?" "Oh, yes, of course." "What sort of interest rates do you charge?" "Two or three percent." This went on, and after two or three questions I could see the Americans really didn't have a concept of what goes on in Russia, so to cut it all off I said, "Well, what percent of your assets goes into this type of loan for cars and buying automobiles and houses and personal property?" "Oh, one-hundredth of one percent," or something. It was minuscule. So then these fellows kind of got the idea and began asking a little more enlightening questions.

They had a terrible problem with the Vietnam War business. Our Intourist guides kept just attacking us all the time about the Vietnam War and what we were doing in Vietnam. And these bankers had no idea what we were doing in Vietnam; they knew nothing about it. I had to educate them on the Southeast Asian Treaty Organization and give them a few arguments that they could give back. But it was kind of sad.

Then we went to Leningrad and went through the same thing, except up there the chief banker was a woman. But it was very interesting. Then from there we flew to Budapest and did the same thing with the Hungarians. This was a big change. Oh, no, sorry--we went to Warsaw first. Even that was a big change.

Chall: In what way?

Swent: Well, they just weren't as rigid. The banking people and all the people that we met weren't as rigid. Much more willing to give and take. It was interesting--in the Moscow interview that we had, when it came to our turn to ask if they had questions, we asked that and they said, no. Well, the implication was, they knew all about it. They didn't need to ask questions. Not that they weren't interested. The implication I got was, they knew all about it; they weren't going to be bothered with asking us questions. This wasn't true in the other places. We had much more interchange. And by then our group had gotten a little more sophisticated in their approach and how to ask questions.

Then we went to Budapest. There they were in the midst of making some very liberal changes in their laws, after getting some more incentives into economics. They were very hopeful that this would help their economy.

From there we flew to East Berlin. I have two commentaries here, to contrast things. When we landed in Moscow--there were fifty-five of us, as I say--we went in a bus to the hotel. The baggage all came on a couple of trucks and arrived at the hotel a few minutes after we did. In the other places where we had gone, in Brussels and in London, when we arrived, why, the tour leader, who had a mimeographed list of all the people, would be met at the airport by a representative of the hotel, and by the time we got to the hotel everybody had been assigned their rooms. They had just written down the numbers and they gave us the keys and off we went.

We got to Moscow to the hotel lobby and turned this list in. Nobody from the hotel met us to begin with. Then they turned the list in to the reception desk and there they began calling us up one by one to sign our name and register and be given the key. In the meantime the baggage was unloaded into the lobby until you could hardly move in there, there was so much baggage. Then the clerk very laboriously copied each name over into what is called the Cyrillic alphabet. Well, it took us an hour and a half to get the whole group registered that way.

Then they began delivering the baggage to the rooms. They had marked each suitcase with chalk with the room number. This was a thirty-two story hotel, and it was served by three or four dinky little elevators, you know--about three-and-a-half or four feet by four feet, and fairly slow. Fortunately we were on the second or third floor, so we didn't have any problem. But they began taking the baggage up in these elevators. They just grabbed the suitcases and put them in, loaded the elevators with as many bags as they could. Then the bellboy would take off. They didn't sort the bags by floors. They would have five bags in the elevator, and it might be for five different floors. They would have to go up to each different floor, and they would hold the elevator while they took that one bag to a room, and then come back and go to another floor, and so on.

Well, it took them <u>ages</u>. In the meantime, the people who were in higher stories were just trapped there. They couldn't get out, because they couldn't get the elevators. It was very, very inefficient.

When we got to East Berlin--this is the real contrast in inefficiencies. The first thing we did was to go through immigration. They said, "Line up in alphabetical order," because these lists were in alphabetical order. We had never been asked to do that before. So we lined up in alphabetical order and we went right through, right now, no problems at all. We didn't really linger in East Berlin very long. We landed at the airport there and a bus took us over into West Berlin.

Chall: Oh, I see. You didn't meet bankers in East Berlin.

Swent: No, we did our banking in West Berlin. We did go through the very thorough check when we went through the border there into West Berlin, through the wall. We stayed several days in West Berlin, and then took a tour back into East Berlin and saw more of it. We again had to go through this elaborate checking at Checkpoint Charlie, where they inspected every detail of the bus, both ways.

Then the rest of the group flew back from West Berlin to the States. We left the group there and flew to Amsterdam, where we picked up a Volkswagen Beetle that we had ordered. Then we drove that up the Rhine River and finally went up to Augsburg. We went to visit the reactor to which we had sold the first uranium. KRB was the utility, and the reactor was in a place called Gunndremingen.

We had a very, very interesting tour there. We met the people that we had negotiated the sale with, and they were very considerate of us. The KRB representative had been in the German army in World War II and had been captured by the Russians and sent off to prison camp in Siberia and wasn't released until seven years after the war was over--a very interesting gentleman. But at any rate, it was very interesting going through this. It was a 250-megawatt reactor, built by G.E. It was just going critical at the time. They did allow me--but they didn't allow the family--to go into the inner area where they were loading the core. I had to get all dressed up in white clothes and everything and go through a special air lock. It was very interesting.

Then we went back--from Augsburg we drove over to Switzerland and down into France. We wound up in Paris. There I made arrangements to visit a French uranium mine down near Vichy called the Bois Noir. It was an underground uranium mine, and I spent a full day underground there. I had a very interesting time. Then I took a train back to Paris, where we delivered our car to be shipped, and then we flew home from Paris.

Chall: Is that the "bug" that you're driving around now?

Swent: Yes, that's the one. We still have it, 145,000 miles later.

Chall: Yes, they do last! Well, how long a time were you away, about five or six weeks?

Swent: It was a six weeks' trip.

Chall: How did the children take all this? Were they pretty good travelers?

Swent: Oh, they did very well. They still have a lot of memories of it, particularly Richard. Richard got very enamored of a violin inBudapest. We bought him a violin and he took up the violin and tried it for several years.

Chall: So that's where he got the violin.

Swent: Well, that was Richard. The one who really did well in violin later was Jeannette.

Chall: Well, so then you had to come back and get to work at headquarters.

Swent: Yes. We came back in September. The first thing we had to do, of course, was get all the stuff out of storage, move it into the rented house and then begin househunting. There was a lot of confusion. At that point Kim had been scheduled to go to Haverford College in September. He had just graduated that spring from Moses Brown. And he kind of got cold feet and didn't want to go. So he managed to arrange that they would accept him the following year, and I got him a job with San Luis Mining Company down in Tayoltita.

Chall: Oh! That's always a good place to start to mature! [Chuckles]

Swent: Yes. That lasted a few months. Something happened--the fellow he was working for had to leave, so then Kim came back. They decided there wasn't any more job for him, and he came back up here and spent the rest of the school year in Piedmont and went to Merritt College. The next school year he went to Haverford in the fall.

Chall: Oh, he did go to Haverford. Did you come directly then to this house?

Swent: Well, yes. We took several months to locate it and buy it. But we had rented the other one for six months, renewable if we wanted to. But we got it done within the first six months. We moved into this house in January of '67.

Chall: Well, you found a beautiful home.

Swent: Well, that may be a good point to quit for today. We've made the transition out of Grants now.

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